COMFORT IS FOR HOME, NOT WORK
Virginia Robbins warns against getting too comfortable in an IT job. It can be a career killer. **PAGE 23**

MOBILE & WIRELESS WORLD
Colleges push to improve communications after the Virginia Tech shootings. **PAGE 13**

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MAY 28, 2007 ■ VOL. 41 ■ NO. 22 ■ $5/COPY

Card Firms Loosen Grip on Data Rules

Wal-Mart, 13 others given advisory role on PCI standard

BY JAIKUMAR VIJAYAN

Large retailers and other key stakeholders in the payment card chain are finally being given a chance to help guide the development and modification of the data security standard imposed on them by the major credit card companies.

Last week, Wal-Mart Stores Inc. and U.K.-based Tesco Stores Ltd. were elected along with 12 other organizations to be the first members of a newly created board of advisers to the PCI Security Standards Council. The advisory board members were chosen by about 200 retailers, banks and other companies that belong to the council, an independent body that was established last September to manage ongoing development of the security standard.

Pitt says the new advisory board gives PCI users "a seat at the table."

Until now, PCI has been crafted by the five credit card companies that created it: Visa International Inc., MasterCard Worldwide, American Express Co., Discover Financial Services LLC and Tokyo-based JCB Co.

Seana Pitt, an executive at American Express who chairs the PCI council, said the group's executive committee hopes that the formation of the advisory board will help reduce the "confusion and resistance" swirling around the security standard. The concerns about PCI stem at least partly from the fact that the companies directly affected by the requirements haven't had "a seat at the table" until now, Pitt said.

According to Pitt,

PCI, page 40

Data Center Hot Spots Put IT Managers on the Spot

Airflows modeled to avoid meltdowns

BY PATRICK THIBODEAU

When Roger Hardy, IT director for the city of Jeffersonville, Ind., gets an alert from an automated monitoring system that his data center air conditioning is failing, he has 20 minutes to fix the system before the computer room's temperature reaches what he describes as its "death point."

If the thermometer inside the data center hits 91 degrees, Jeffersonville's IT equipment is cooked — literally. That's what happened this month when the city lost $20,000 worth of equipment after its strained air conditioning system shut down during a spell of warm weather.

Hardy, who is the sole IT worker for the community of about 29,000 residents, was getting the approval of city officials last week for adding more chiller capacity. That wasn't an IT problem he expected when he took the job in Jeffersonville last December, since the city built a new data center just last year.

But Hardy's predecessor died

Keeping Cool, page 14

NEWSPAPER

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INSIDE

SERVER VIRTUALIZATION:
IT Mentor Jonathan Hassell offers tips to help you decide whether it's right for you. PAGE 31

REMOTE WORKER'S Survival Guide

Advancing your career while toiling far from base camp requires special skills. **Julia King** reports on how IT professionals thrive in the wild. **Page 25**

BRAD GRAHAM ILLUSTRATION

The Highly R

VOLUME 1 – ISSUE 3

Windows Server 2003

For all stories go to

NCsoft WON'T PLAY WITH LINUX, CHOOSES WINDOWS SERVER INSTEAD

Tom Nagy for The Highly Reliable Times

UP TO 400,000 GAMERS AROUND THE WORLD can connect to NCsoft's game service simultaneously.

Microsoft

eliable Times

www.microsoft.com/getthefacts

special edition

Reliability Is Essential for Online Game Company

By CHANG SUN PARK

SEOUL, Korea – NCsoft, an international online game company based in Korea, has an infrastructure that allows 400,000 users to connect to its game service simultaneously, with up to 10 million users per year all around the globe. To accommodate this load, NCsoft runs nearly 1,000 large-scale server farms capable of handling 40 terabytes of data. It is, in short, a massive system that cannot afford downtime.

That need for bulletproof reliability is why NCsoft chose Microsoft® Windows Server™, according to Kwak, Soon-wook, Director/Chief of Publishing Unit at NCsoft. "Before we implemented our server system, we directly compared Windows Server with Linux on a variety of different criteria. Windows Server 2003 provided not only reliability, which is our first priority, but also development productivity in a 64-bit environment, and cost-efficiency," said Kwak. "It was an easy choice to make."

Indeed, it was a choice that was critical to the continuing success of NCsoft, according to Corporate PR Team Leader Joo Young Kim. "The importance of online stability is paramount; in the case of games such as *Lineage* 2, our gaming contract with our customers states that an interruption lasting over four hours will result in consumer compensation. The Windows Server platform offers reliable service to hundreds of thousands of simultaneous online users, and therefore plays a crucial role in protecting the fantastic reputation that *Lineage* enjoys," said Kim.

For the full NCsoft story, plus other case studies and independent research findings on the reliability of Windows Server versus Linux, visit microsoft.com/getthefacts

DOWNTIME VERY UNPOPULAR: A recent

SPECIAL REPORT: Stunning discovery of secret to success

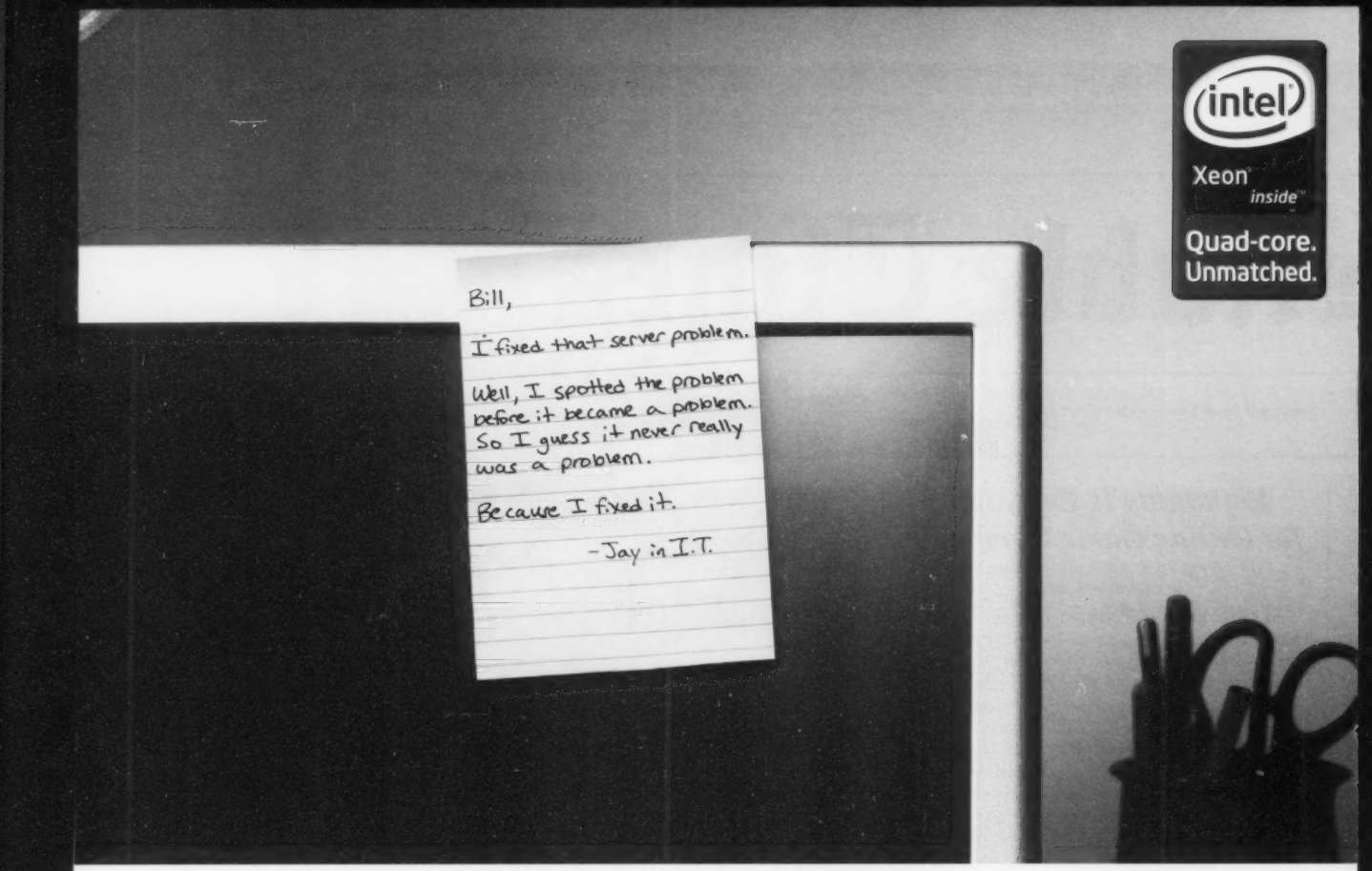
NCsoft's Kwak, Soon-wook (above) stated yesterday that Windows Server is the secret behind maintaining the reliability and performance of their system.

EXCLUSIVE INTERVIEW:

"Before we implemented our server system, we directly compared Windows Server with Linux on a variety of different criteria. Windows Server 2003 provided not only reliability, which is our first priority, but also development productivity in a 64-bit environment, and cost-efficiency. It was an easy choice to make."

— Kwak, Soon-wook, NCsoft Director/Chief of Publishing Unit

ARE YOU AVAILABLE? Reliability, dependability, and availability were found to be the favorite words of SysAdmins around the globe, according to a new research study published


Bill,
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Well, I spotted the problem before it became a problem. So I guess it never really was a problem.
Because I fixed it.
-Jay in I.T.

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1. A HP SC11Xe Host Bus Adapter ($209) is a required option needed to connect the Ultrium 448 solution to the DL360 G5 server. Prices shown are HP Direct prices; reseller and retail prices may vary. Prices shown are subject to change and do not include applicable state and local taxes or shipping to recipient's address. Offers cannot be combined with any other offer or discount and are good while supplies last. All featured offers available in U.S. only. Savings based on HP published list price of configure-to-order equivalent ($5125 - $1426 instant savings= SmartBuy price $3699). 2. Financing available through Hewlett-Packard Financial Services Company (HPFS) to qualified commercial customers in the U.S. and subject to credit approval and execution of standard HPFS documentation. Prices shown are based on a lease 48 months in term with a fair market value purchase option at the end of the term. Rates based on an original transaction size between $3,000 and $25,000. Other rates apply for other terms and transaction sizes. Financing available on transactions greater than $349 through June 30, 2007. HPFS reserves the right to change or cancel these programs at any time without notice. Intel, the Intel Logo, Xeon and Xeon Inside are trademarks of Intel Corporation in the U.S. and other countries. © 2007 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice.

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12 Information Builders conference attendees say that business intelligence tools are proving to be beneficial to corporate bottom lines — once end-user issues have been resolved.

13 Several university CIOs at the Mobile & Wireless World conference said that in the wake of the shootings at Virginia Tech, they're scrambling to find new ways to inform their students and employees about emergencies.

13 More Mobile & Wireless World: Fidelity Investments plans to make its mobile applications available on the iPhone; and IT managers at Marriott are eyeing dual-mode phones that support both Wi-Fi and cellular services.

14 Salesforce.com users say the company's new SOA tool is impressive but was introduced too late to help with many integration projects in the short term.

16 The Grill: Digg CEO Jay Adelson talks about the company's news-ranking methodology, the first Web 2.0 user revolt and the challenges that Digg is facing.

20 Global Dispatches: Indian PC dealers shut down for a day to protest allegations by Microsoft that some of them sold pirated Windows software; and Paris-based BNP Paribas Bank is fined by the U.K. for having inadequate data-security measures.

40 Minnesota enacts a law requiring companies to reimburse banks for the costs of reissuing cards if they store payment card data in violation of the PCI standard and suffer a security breach.

STRATEGIES & TACTICS

When Your Paycheck Comes From India

IT professionals at different stages in their work lives talk about the career and cultural implications of signing on with an Indian outsourcing firm.

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Remote Worker's Survival Guide. IT professionals working out of their bosses' view are on their own when it comes to managing their careers. Here are tips from IT professionals who have thrived far from base camp.

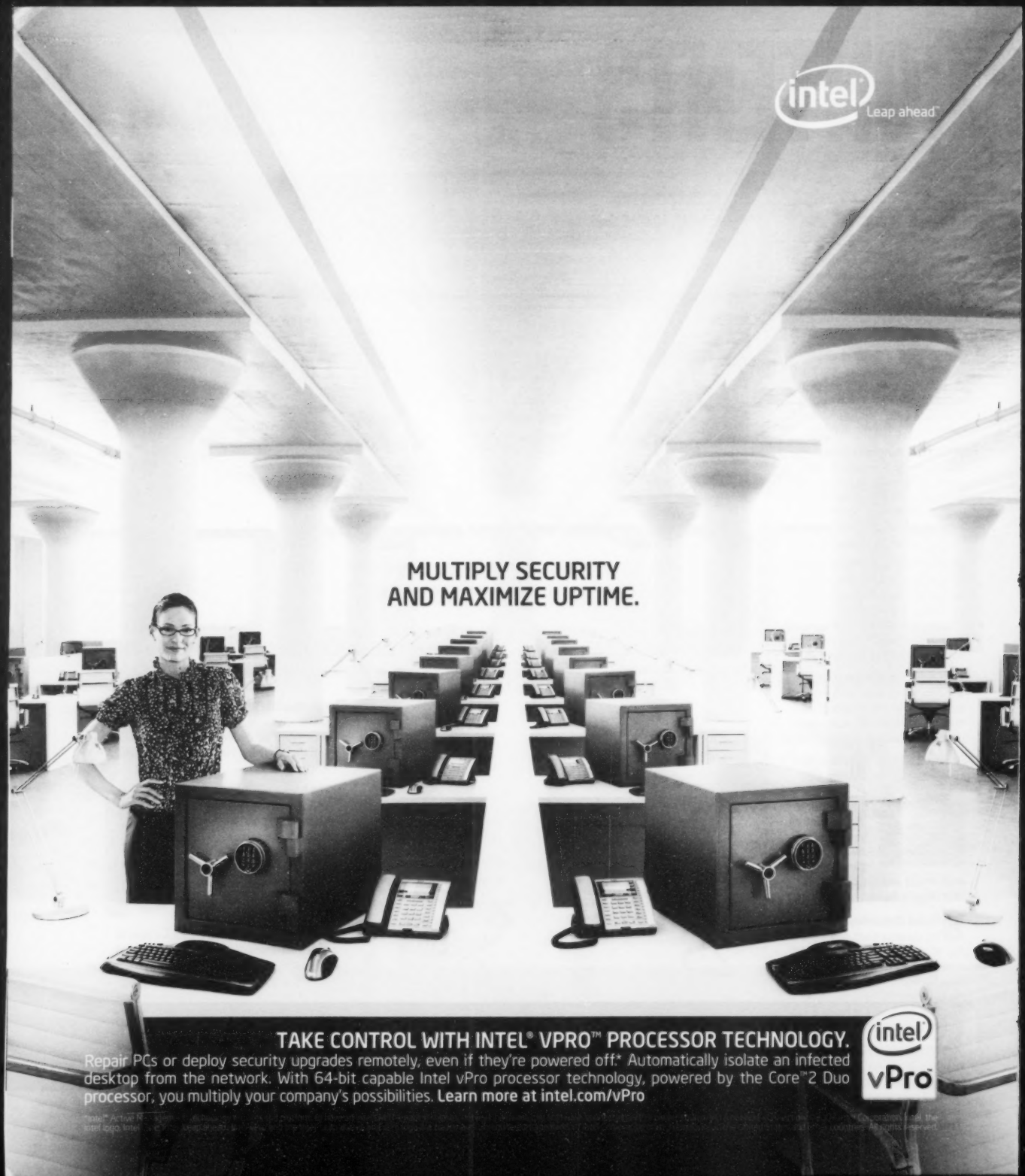
BENJY BRUKMAN ILLUSTRATION

30 Web Site ROI. It takes some effort to analyze the return on investment your Web site delivers. But it is doable, and the resulting business intelligence is worth it.

31 Server Virtualization: Getting Started. IT Mentor Jonathan Hassell offers five tips to help you decide whether server virtualization is right for your company — and to get you started if it is.

32 Blog Trolls and Cyberstalkers: How to Beat Them. Corporate and personal blogs alike are susceptible to the ravages of gremlins who get satisfaction out of disrupting online communities. Here's how to spot them and how to fight back.

34 Security Manager's Journal: Compromise DRM Better Than None. Mathias Thurman wanted more out of digital rights management than his company could afford, but a compromise system turns out to be better than nothing.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22 **Thornton A. May** takes a look at the pressures hitting IT executives who work in the industries that are far ahead of the curve on digitization.

23 **Virginia Robbins** is wary of getting too comfortable in a job. She thinks that can prove to be a career killer.

36 **Paul Glen** says that to effectively manage client expectations, you need to look at product, process, roles and relationships.

42 Frankly Speaking: **Frank Hayes** thinks you should take a hard look at your company's automated customer service and ask whether a system that's unfriendly to users might be costing you customers.

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COMPUTERWORLD.COM THIS WEEK

Top 10 Dead (or Dying) Computer Skills

With applications out there still running Cobol and Fortran, it's tough to declare any skill unneeded. However, a number of once-popular technologies are on the wane, meaning demand for people with knowledge about them is soft at best. Mary Brandel spoke with industry experts and came up with our list, which includes:

■ Nonrelational databases

Remember IBM's IMS? SAS Institute's System 2000? As relational databases have taken hold, hierarchical systems have gone the way of rotary-dial phones.

■ Systems Network Architecture

While many financial institutions still have SNA installations, such skills don't seem to be worth much in the open market.

■ C programming

"C++ and C# are still alive and kicking, but try to find a basic C-only programmer today, and you'll likely find a guy that's unemployed and/or training for a new skill," says Internet entrepreneur Stewart Padveen.

See the rest of the list at:
www.computerworld.com/careers

BLOGS SPOTLIGHT

Use Free Wi-Fi, Get Arrested

Note to Wi-Fi users: The next time you use a free hot spot, think twice. You could be arrested for using the service. That's what happened to a Michigan man, who was arrested for tapping into a free Wi-Fi hot spot from his car rather than from the cafe that sponsors the hot spot, blogs Preston Gralla.
www.computerworld.com/blogs/node/5563

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SHARK BAIT BETA

How to Make a Systems Manager Fly

Halon's a handy thing to have when a fire breaks out at a large industrial site. But when the alarm is sounded not by a fire but by a careless electrician . . .
http://sharkbait.computerworld.com/?q=node/1011

How to Fight Mobile Security Threats

MOBILE & WIRELESS: Attacks on mobile devices that are aimed at stealing information and costing you money are becoming more common. Have you done all you can to secure your handhelds?
www.computerworld.com/mobilewireless

Microsoft Demos Longhorn 'Hot Swap' Feature

SERVERS: The goal is to allow administrators to add and replace memory and chips before the components fail, or as an application's workload or performance needs change.
www.computerworld.com/servers

Hack DNS for Lightning-Fast Web Browsing

NETWORKING: Not pleased with your surfing speed? Who is? We offer some no-cost ways to fine-tune DNS for faster browsing.
www.computerworld.com/networking

Opinion: Enterprise Backup Options for the Mac Looking Up

MACINTOSH: Retrospect, the one-time gold standard of backup software for Macs, may be in something of a slump, but that doesn't mean new options aren't cropping up.
www.computerworld.com/mac

Q&A: Microsoft's Utility Computing Guru

DATA CENTER: Devin Murray, Microsoft's group manager of utility services, says the vendor's own server utilization issues are much like everyone else's — except it has a lot more systems to deal with than most companies do.
www.computerworld.com/servers

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AT DEADLINE

HP Settles Charges In Director Case

Hewlett-Packard Co. has settled charges that it violated U.S. Securities and Exchange Commission rules by not fully disclosing the reason Thomas Perkins resigned from its board in May 2006. Perkins quit the board after it revealed that private investigators hired by HP may have used illegal methods to find the sources of board leaks to the media. Under the agreement, the SEC won't fine HP or impose any penalties related to its investigation.

CFO Says More CA Layoffs Coming

CA Inc. Chief Finanical Officer Nancy Cooper said the continuing restructuring at the software vendor will likely result in further layoffs. In a conference call with analysts, Cooper declined to disclose specific plans but said "additional efficiencies" could be achieved at the company. CA cut 1,700 jobs in its fourth quarter, which ended March 31.

Dell Expands Sales To Wal-Mart Stores

Dell Inc. will start selling desktop PCs at Wal-Mart stores on June 10, veering away from its longtime direct-sales model in an attempt to recapture profits. Wal-Mart Stores Inc. will initially sell Dell's Dimension Multimedia Desktop systems for less than $700 each. The companies said that plans to add more models will be announced later.

Coalition Calls for Broadband Policy

A coalition of 54 organizations, including Amazon.com Inc., eBay Inc. and Google Inc., has called on Congress to create a national broadband policy, contending that there is no plan to provide affordable, widespread access. The Open Internet Coalition noted that the U.S. has fallen to 15th in per-capita broadband adoption among the 30 members of the Organization for Economic Cooperation and Development.

Execs Seek Help in Web 2.0 Efforts

George Washington CIO, others hope EMC Documentum updates come soon

BY BRIAN FONSECA
ORLANDO

AN ELECTRONIC revolution is taking place at the George Washington University, whose CIO last week called for technologies that can help satisfy increasing user demands for support of Web 2.0 technologies like blogs and wikis.

Ronald Bonig, interim vice president and CIO at the Washington-based university, said last week that the effort will get a huge boost if EMC Corp. soon makes good on its promise to support the Web 2.0 universe in future versions of its Documentum content management software.

At a press briefing at the EMC World user conference here last week, Mark Lewis, executive vice president and chief development officer at EMC, said the company is working to add Web 2.0 support into the Documentum software — but he didn't provide a timeline for shipping such capabilities.

"We need to start to decouple information from applications," said Lewis. "If we can do that, then we make the applications capable of leveraging information from different data sources."

A New Web Order

Bonig said the George Washington University's IT unit is in the process of building support for Web 2.0 technologies, since many students and faculty members are already posting and sharing online content on vehicles such as the MySpace.com social networking site, blogs and wikis.

"E-mail is passé for students; they all use text messaging, wireless, all the new [social networking] tools, wikis and blogs," he said. "The kids are already leading us there, which presents us with some challenges to keep track of them."

Bonig said the school is also working with various departments, such as the registrar's office, to enable them to update and push out their own data — an effort that would prove far easier with Web 2.0 support.

During the press conference, EMC also launched Documentum TaskSpace, the new transactional content user interface for its next-generation Documentum 6 (D6) enterprise content management platform. TaskSpace will ship in the third quarter of this year, said Hopkinton, Mass.-based EMC.

Linda Toale, a systems engineer/architect for finance systems at Delta Technology LLC, a subsidiary of Altanta-based Delta Air Lines Inc., said she plans to upgrade to D6 sometime in 2008.

> "E-mail is passé for students; they all use text messaging, wireless, all the new [social networking] tools, wikis and blogs."
>
> RONALD BONIG, INTERIM VICE PRESIDENT AND CIO, GEORGE WASHINGTON UNIVERSITY

Toale said she is interested in the enhanced Web publishing capabilities promised in the new version.

In the long run, Toale said, she is looking for Documentum to provide tools to help users manage content without significant help from IT — a goal that would be helped with Web 2.0 support.

If end users assumed greater responsibility for managing and controlling their content, Toale said, Delta's IT staffers could concentrate on other critical duties. "Anything they can do on their own makes life much easier for us," she said. "We don't want to say no, but we are always busy."

Still, some EMC World attendees questioned whether concerns about control, security and trade-secret exposure would deter corporations from ever embracing Web 2.0 tools.

"The whole idea of open source really scares management," said Heath Bair, a software specialist at Columbus, Ohio-based Nationwide Financial Services Inc. "I doubt I'll ever see management embrace it. They want to keep [very stringent] control."

Cisco, RSA Team Up to Encrypt Network Data

ORLANDO

CISCO SYSTEMS INC. and RSA Security Inc. last week announced plans to jointly develop security technology that will provide encryption keys for archived data first on tape drives and eventually for other types of networked storage media.

Executives said the two firms plan to integrate Cisco's MDS 9000 Storage Media Encryption and RSA's Key Manager technologies to provide centralized data encryption, key management and key provisioning capabilities to storage devices on Cisco networks.

AZHADI prefers appliance to built-in encryption keys.

The encryption technology will be added to Cisco-based storage-area networks by inserting a jointly developed line card into a Cisco server chassis. The first card, for tape drives, will ship later this year.

Rajeev Bhardwaj, director of product management at Cisco, contended that the tool will be easier to implement and use than encryption and key management appliances.

Such appliances, from vendors such as NeoScale Systems Inc., Vormetric Inc. and Network Appliance Inc.'s Decru Inc. unit, require IT personnel to rewire and reconfigure networks, he said. "From our perspective, you install the line card, and with the flip of a switch you say, 'This backup server encrypts this tape,'" Bhardwaj said.

The added work isn't a liability for some IT managers, who still prefer using appliances to protect data.

"The reason I like the appliance is because it's absolutely nonobtrusive to my main system," said Sean Azhadi, senior vice president of technology at San Diego County Credit Union. "That is a huge advantage because I don't have to work with IBM or any of my other vendors to try to create some sort of environment to support this stuff."

The credit union, which has $3.9 billion in assets, 800 employees and 25 branch locations across San Diego and Riverside counties in California, tested NeoScale's CryptoStor appliance for nine months before implementing it companywide three weeks ago, Azhadi said.

Because the NeoScale appliance is working as needed, the credit union has no plans to evaluate the new Cisco-RSA offering, Azhadi noted.

Cisco and RSA announced the joint effort here last week at a press conference at EMC World, the user conference of RSA's parent company, EMC.

Bhardwaj said the new line card will provide 10 gigabits of encryption throughput and an application programming interface for adding key management to drives on Cisco networks.

EMC and Cisco officials acknowledged that the agreement is nonexclusive. Bhardwaj would not disclose a schedule for shipping future releases of the card.

– BRIAN FONSECA

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BRIEFS

Judge Dismisses All CA Fraud Charges

A federal judge has dismissed all pending fraud charges against CA Inc., noting that the software vendor has complied with the terms of a September 2004 deferred-prosecution agreement. CA had been charged with securities fraud and obstruction of justice for falsely recording software licensing revenue. The deal required CA to cooperate with investigators and create procedures to prevent such crimes.

SAP Labs U.S. Chief Stepping Down

Aliza Peleg, managing director of SAP Labs U.S., plans to step down by the end of June. Peleg joined SAP in March 2001, when it bought TopTier Software Inc., where she was general manager of TopTier Israel. SAP will replace Peleg, a spokesman said. In the meantime, Executive Vice President Doug Merritt will oversee SAP Labs U.S.

Office Girds Against Zero-Day Attacks

Microsoft Corp. has released a pair of tools designed to protect users from zero-day attacks on Office applications. Zero-day attacks take advantage of vulnerabilities in software before a patch is released. The Office Isolated Conversion Environment tool is designed to protect Office 2003 and 2007. The File Block Functionality tool enables administrators to block access to certain files when a specific threat arises.

Investment Firms to Buy Alltel for $27.5B

Alltel Corp. has agreed to be acquired by TPG Capital LLP and the private equity division of Goldman Sachs Group Inc. for $27.5 billion. Alltel claims to have 12 million mobile phone subscribers in 35 states. Alltel said most of its management team, including CEO Scott Ford, plan to remain at the firm. The deal is expected to close by the end of this year.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

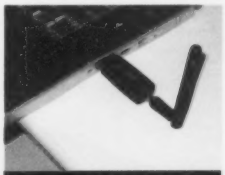
There's Tech Treasure Tucked ...

... in and around Boise, Idaho. Don't let the soaring mountains, wild rivers, dense forests and high desert fool you into thinking that Boisians spend all their time skiing, hiking, kayaking, fly fishing, camping, hunting, biking and generally goofing off. They spend a bit of their lives indoors toying with some pretty interesting technology at both local companies and renowned multinationals. Take Hewlett-Packard. In 1973, the granddaddy of high-tech companies planted roots in the Treasure Valley, home to state capital Boise. Today, HP runs one of the world's most sophisticated testing labs there. Its purpose is to ensure that HP's printer division — the company's most profitable — retains its dominant market share, which it achieved through a reputation for reliability and performance, not low prices. According to Dave Novak, manager of LaserJet hardware test operations, HP tests more than 300 types of paper in its devices, running through enough sheets every month to dwarf the Empire State Building. (They all get recycled, of course.) Given the diversity of paper content from around the globe — some is made from grass instead of wood pulp, for example — and the myriad configurations possible with each printer, the lab has to be prepared to test up to 6 million variables, Novak says. HP even built a massive $4 million chamber just to certify that its printers pass the radio frequency interference regulations for every nation it ships products to. As a result, Novak brags, HP's printers "are the most reliable IT product ever seen."

4M-8M Pages of paper tested in HP's printers each month.

Small is not ...

... a bad word in Boise. Dreaming of building the next HP in Idaho doesn't rank high on the lists of many IT entrepreneurs in the Treasure Valley. Just ask Ryan Woodings, founder of MetaGeek LLC in Nampa. He designed the Wi-Spy USB dongle and software to replace bulky and pricey spectrum analyzers. The tool can be used on any Windows computer to detect traffic in the 2.8 GHz band so network engineers can better troubleshoot and manage Wi-Fi, Bluetooth and other services operating in that spectrum. Woodings plans to ship a unit for the 5.8 GHz band in Q4. Traditional spectrum analyzers weigh a couple dozen pounds and can cost tens of thousands of dollars. The 2.8-GHz Wi-Spy dongles weigh next to nothing and cost $199 or $399, depending on the model. And Woodings is scrambling to keep up with demand. But he dreads a megasize MetaGeek. "I don't want a big company," he says. "It wouldn't be fun anymore."



MetaGeek's Wi-Spy is a USB device that traces network activity in the 2.8 GHz band.

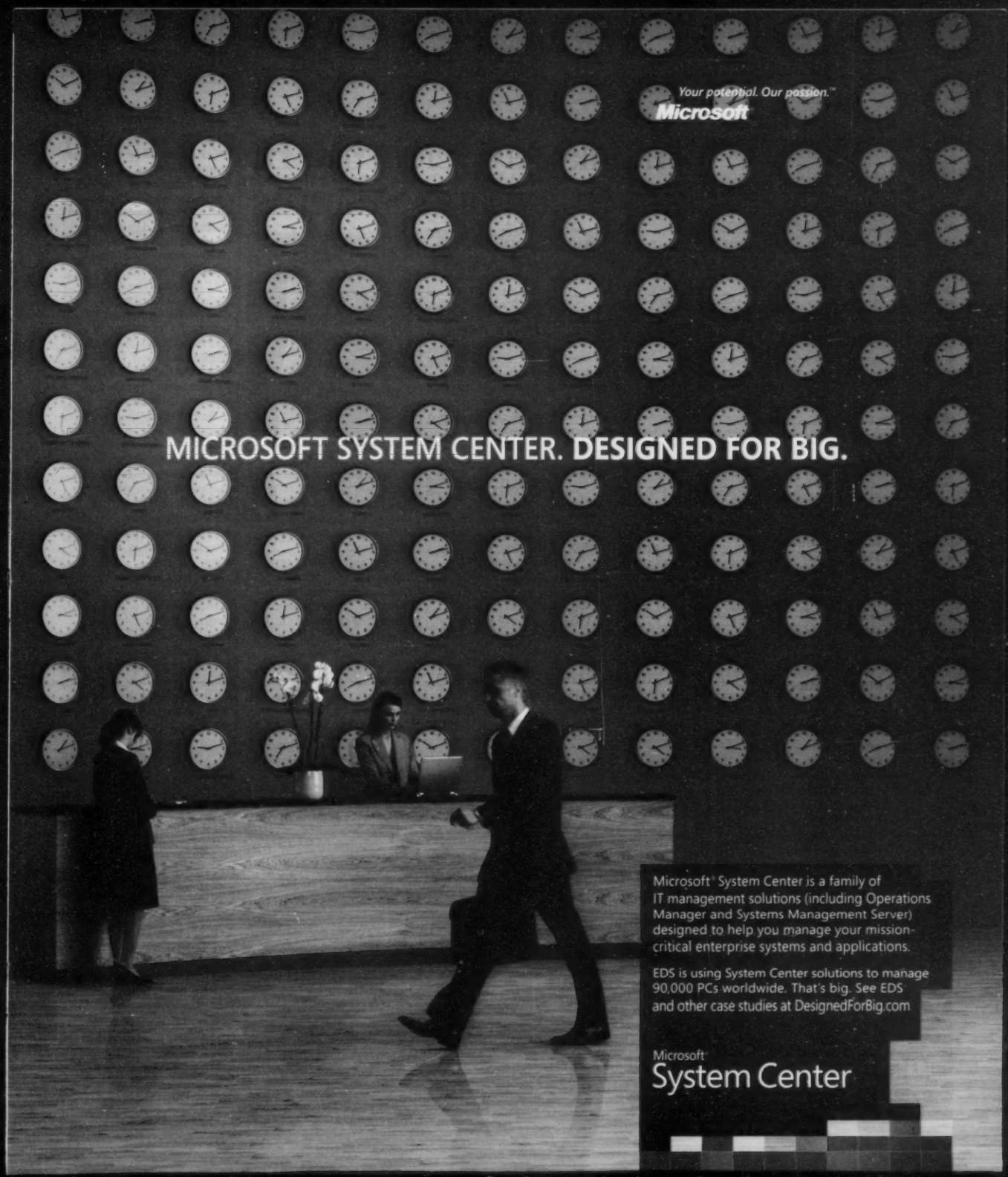
Bradley Wiskirchen, CEO of Boise-based Keynetics Inc., which pulls in revenue of more than $200 million by specializing in risk control systems for e-commerce, currently employs only 70 people. He intends to hold his workforce to under 100, even if it means selling off business units, as he did last year. And in 1999, Treetop Tech Corp., also in Boise, topped out at 168 on the *Inc.* 500 list of fastest-growing companies in the U.S. But a family health crisis convinced Jason Crawforth, chairman and founder of the software development company, that he wanted Treetop to be "a lifestyle business" and not just a big company. Therefore, he scaled back his operation to the point where he says he now knows the names of all his employees and their kids.

Jobs aplenty await ...

... software developers. Despite the penchant for keeping companies small, there is a dire shortage of programmers in the Treasure Valley, many IT execs complain. Crawforth estimates that unemployment for software developers in the region is less than 1%. Kevin Benedict, CEO of MobileDataforce Inc. in Boise, is very concerned. Some customers use his company's PointSync Mobility software for a variety of in-the-field operations, such as asset management, inspection, field service and delivery tasks. Although the tool is template-based, some customization for each application is inevitable. But Benedict has had to push work to his firm's subsidiaries in the Netherlands and Australia, where programmers are more available. Part of the problem, he says, is that the handful of computer science graduates from Boise State University "all get snatched up before we can get them." He also suggests that developers balk at the lower pay offered relative to Silicon Valley salaries but fail to factor in the lower cost of living. The median price for a home in Santa Clara County, the heart of Silicon Valley, reached $803,000 this month, almost four times what it is in Boise. And developers should also consider the local lifestyle. Benedict says that one of his programmers spends his lunch hour fly fishing from the company's patio above the Boise River.

BENEDICT: Boise State CS grads "get snatched up before we can get them."

$204k Median home price in Boise, says the National Association of Realtors.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BRIEFS

Apple Sued Over Laptop Displays

Two San Diego men have filed a lawsuit against Apple Inc. over the quality of its laptop displays. The lawsuit charges Apple with falsely advertising that MacBook and MacBook Pro displays can produce "millions" of colors. "The displays are only capable of displaying the illusion of millions of colors through the use of a software technique," the suit claims.

Open-Source Firms Raise Venture Funds

Two open-source companies have completed new financing as each moves to grow its business. MuleSource Inc., a provider of open-source infrastructure and integration software, raised $12.5 million, adding to its initial $4 million round of investment. Open-source data backup and recovery firm Zmanda Inc. raised $8 million, building on an initial $5 million investment.

Google Set to Expand in Seattle

Google Inc., in an effort to boost its presence in the Seattle area, has agreed to lease 60,000 square feet of a new building in Seattle, according to a U.S. Securities and Exchange Commission filing. Google has had an engineering office in Kirkland, Wash., for two years. Google would not comment about the expansion plans near Seattle, where rival Microsoft Corp. employs more than 35,000 workers.

Cisco Buys Video Security Firm

Cisco Systems Inc. has agreed to buy software maker BroadWare Technologies Inc. in a bid to acquire technology to improve its video surveillance offerings. BroadWare's software is used to collect, record, route, view and manage live and stored surveillance video over computer networks. It lets any authorized user on the network access the video. Terms of the deal, expected to close in July, were not disclosed.

IT Officials Are Clearing BI Hurdles to Expand Systems

Many firms are rushing to implement policies to limit data accessed by users

BY HEATHER HAVENSTEIN
LAS VEGAS

PROVIDING BUSINESS intelligence tools to a wide swath of users can boost a company's bottom line. However, some IT executives attending Information Builders Inc.'s Summit 2007 user conference here last week noted that wider use of the tools can also create problems for IT shops.

Those problems range from slow response times because of eager first-time users trying to access more data than they need to strong resistance to any changes in BI tool sets.

Some users also said that large implementations can go smoothly and provide quick payback.

For example, Ford Motor Co. was able to expand its use of Information Builders' WebFocus BI tool this year without major problems, said Jim Lollar, Ford's systems manager for global warranty operations.

The automaker initially used the tool to build a portal that provides its 10,000 dealerships with dashboards that show whether their costs for warranty repairs are within corporate parameters, he said.

"The real value is we get these dealers back near their peer group's average [for repair costs]," Lollar said. "That is when they really save Ford money."

This year, Ford added a WebFocus-based application that collects data about repair performance for corporate auditors, Lollar noted.

On the other hand, Steve Watson, assistant director of the finance office of the Maryland Department of Transportation in Hanover, Md., said that when BI tools were first installed there, inexperienced users quickly started running queries unrelated to their jobs.

"We had people running reports and doing queries [that] were causing a lot of performance problems," he said.

> "I had to go against the whole state of Indiana when I switched off Cognos."
>
> **DAVID HUFFMAN,** CIO, INDIANA PUBLIC EMPLOYEES RETIREMENT FUND

The department quickly implemented customized training programs to ensure that people accessed only data needed to do their jobs, Watson said.

Steve Simon, senior technology officer at State Street Corp., an investment management firm in Boston, agreed that giving many users access to reams of BI data is "an accident waiting to happen."

When State Street users complain that reports take more than five minutes to run, Simon said they are told that responses would be far quicker if requests were limited only to information needed to make specific decisions.

The Indiana Public Employees Retirement Fund, which manages $17 billion in pension funds for retired public workers, faced different problems when implementing BI tools, said CIO David Huffman.

IT managers there heard loud complaints from users protesting a decision to replace the Impromptu BI tool from Cognos Inc. with WebFocus, he said. "I had to go against the whole state of Indiana when I switched off Cognos," Huffman said.

Despite the initial resistance, the Indianapolis-based agency has successfully implemented the WebFocus tool set, he said. Huffman noted that now that the software is in place, state workers receive their first retirement check 30 days after retiring. Prior to the switch, they had to wait as long as 180 days.

The agency decided to replace the Cognos tool because it required IT to write a new program from scratch every time a user wanted a new report, Huffman said. To facilitate the conversion process, IT officials based their selection on feedback from users who were involved in testing a variety of tools.

WebFocus-Excel Link Strengthened

LAS VEGAS

INFORMATION BUILDERS last week announced a new version of its WebFocus business intelligence tool set that it said improves integration with Microsoft Excel and adds portable dashboards.

WebFocus 7.6.1 adds a plug-in for Excel, called Quick Data, that connects the BI tool's reporting engine directly to the Microsoft Corp. spreadsheet, the company said. It was unveiled at Information Builders' Summit 2007 user conference here.

The link will allow users to build BI reports from within Excel and see accurate, up-to-date data when they open Excel, the company said.

The new Active Dashboards feature will let users analyze data in different ways, such as by product or customer segments, without having to be connected to a network, according to Information Builders.

Coty Inc. expects that the new portable dashboards will let the company provide sales personnel with "their entire world," whether they're connected to the network or not, said David Berry, senior vice president and CIO. The New York-based cosmetics firm is in the process of rolling out the new version of WebFocus, he said.

Berry also expects that the new Excel plug-in will prove valuable to Coty users. "I'm surprised [Information Builders] didn't do this a long time ago," he said. "You can try to convince people that there are ways other than Excel to share data. The average financial guy is not going to give up on Excel."

Other users said the updates could prove dangerous.

Steve Simon, senior technology officer at State Street Corp., said his firm won't use the Active Dashboards feature because it increases the potential for security breaches if company laptops are lost or stolen.

And Chantal Berthiaume, director of network optimization at Montreal-based Air Canada, said she would be leery of providing an Excel plug-in to users because "it is too dangerous. Everyone will have their own numbers."

Information Builders said the new version of WebFocus is also integrated with the enterprise service bus sold by its iWay Software Inc. subsidiary.

Berry said he would like to use the tool to embed BI data into Coty's business processes to provide manufacturing officials with real-time data on hot-selling products.

"If we have a runaway product, I want to know about it now, not tomorrow morning," he said. "Today, it can take us weeks to find out we have a product that is flying through the roof."

Patrick Yip, a director at iNautix Technologies India Pvt., an affiliate of securities clearinghouse firm Pershing LLC, said his company has used other tools to embed WebFocus into its processes to monitor specific tasks like issuing a check.

Yip noted that because such oversight "causes a lot of anxiety" among workers fearful of corporate surveillance, iNautix reassures employees that the effort is focused on customers.

– HEATHER HAVENSTEIN

College CIOs Work to Boost Emergency Communication Capabilities

Virginia Tech shootings spur colleges to seek new ways to send warnings

BY MATT HAMBLEN
ORLANDO

Last month's mass shootings at Virginia Tech have become a call to action for many university IT managers, who are being asked to find new methods — including wireless approaches — of communicating quickly with students and workers during emergencies.

COMPUTERWORLD MOBILE & WIRELESS WORLD

Several university CIOs who attended *Computerworld*'s Mobile & Wireless World conference here last week said that they are under scrutiny as school officials look to bolster emergency communication capabilities following the Virginia Tech shootings, which resulted in the deaths of 32 victims and the shooter.

"That unfortunate disaster has had a big effect on all colleges," said Jay Dominick, CIO at Wake Forest University in Winston-Salem, N.C. "I've been in constant meetings since it happened to talk about ways we can better communicate on campus in such situations."

Dominick said in an interview after speaking at the conference that although Virginia Tech officials were "pilloried" for waiting more than two hours to send out an e-mail notice about an initial shooting incident in a dormitory, it's unlikely that things would have been done any differently at most other colleges.

"I think they did a great job getting the word out," he said. "Most campuses wouldn't even have the processes in place to know what things to do to respond to such an emergency within that amount of time."

Next month, Dominick expects to decide whether to expand a pilot program in which cell phones equipped with applications useful for classes and campus life were sold to Wake Forest students.

As part of the pilot program, which started last September, Wake Forest and Cingular Wireless LLC (now part of AT&T Inc.) sold Cingular 8125 phones to 100 students for $299 each. The phones can work in Wi-Fi mode or on the Cingular cellular network, and the vendor gave the students a 20% discount on its voice and data plans.

Dominick said that the pilot worked fairly well but that the devices were expensive and complicated to use. And although the 8125s could be used to send quick notifications of emergencies through voice or text messages, rolling them out to all of Wake Forest's 4,300 undergraduates by the start of the next school year might not be possible. Dominick said that he might consider a simpler, less costly device instead.

St. John's University in New York also is considering adopting new communications and security technologies in the aftermath of the shootings at Virginia Tech, formally known as Virginia Polytechnic Institute and State University.

"We had done several things prior to Virginia Tech, but there are many things to be learned from that tragedy," said St. John's CIO Joseph Tufano. He added that sending voice and text-messaging alerts to the cell phones of students is "a good idea, but not everybody has one, and we do turn them off in classes."

Adding More Tools

Within the past year, St. John's has installed 10 security cameras connected via a wireless network in remote areas on its four campuses, increasing the total number of cameras it has to 258. Tufano said that IBM consultants helped upgrade a videotape security system to one that is digital but still uses the older cameras to save costs. The new system allows for quicker searches of stored images and will be upgraded to enable digital searches of license plates read by cameras at campus entry points, Tufano said.

To help spread notifications about emergencies, he added, more large-screen monitors may be installed in common areas and classroom buildings.

Facial-recognition software might also be adopted, according to Tufano. In addition, St. John's may explore using software that could detect unusual movements captured by surveillance cameras, such as a single person entering an auditorium as a crowd is leaving.

But technology isn't the only answer, Tufano said, noting that good emergency-response procedures and knowledgeable security personnel are vital as well.

He said two former senior officials from the New York City Police Department are in charge of campus security at St. John's, "and they know their stuff."

Fidelity Takes iPhone Support Call

ORLANDO

APPLE INC.'S iPhone, which is scheduled to debut next month, may be primarily a consumer multimedia device and wireless phone, but it is very much on the mind of Joseph Ferra, chief wireless officer at Fidelity Investments in Boston.

Ferra is tasked with making Fidelity's Web-based investment tools and the applications supporting its BostonCoach limousine service available on wireless devices. He told other IT managers at *Computerworld*'s Mobile & Wireless World conference here that the iPhone is one of the handhelds Fidelity wants to be ready to support as soon as it becomes available.

Fidelity now has about 1 million wireless users, Ferra said. He added that the firm has become so keen on customers' use of handhelds that it now benchmarks the capabilities of its Fidelity Anywhere wireless applications against those of Amazon.com Inc. and eBay Inc.

In the past, Fidelity judged itself against its financial services rivals on factors such as device support, ease of use and lack of technical problems. But comparing itself with Amazon and other e-commerce firms gives the company a better indication of how much it needs to keep improving its technology, Ferra said.

– MATT HAMBLEN

Marriott Execs Check Out Dual-Mode Phones

ORLANDO

ARNALDO IMPELIZIERI started his career 20 years ago as a cook at a Marriott hotel. Now, as an IT manager, he's looking to cook up a mixed Wi-Fi and cellular recipe for hotel guests.

Impelizieri, who works for Marriott International Inc. as director of hotel technology at the Grande Lakes Orlando resort here, is surveying vendors of dual-mode phones that support both cellular and Wi-Fi services and could be used by guests as well as hotel employees. "An event organizer could check in and use the phone on the hotel Wi-Fi [network] and then use it off-site over cellular while running errands," Impelizieri said.

CHRISTIE'S PHOTOGRAPHIC STUDIO

Schubert says traditional analog phones eventually will disappear from hotel guest rooms.

But the dual-mode phone vision is still somewhat abstract, acknowledged Impelizieri. He and other Marriot IT managers would also need to sell the concept to executives at Morgan Stanley, which owns the Grande Lakes resort and has hired Marriott to run the Ritz-Carlton and JW Marriott hotels located on the property.

Computerworld's Mobile & Wireless World conference was held at the Ritz-Carlton last week. Neil Schubert, vice president of IT strategy at Marriott International, said in a keynote speech that a recent upgrade of the four-year-old Grande Lakes included the addition of more than 185 Wi-Fi access points in a bid to provide better voice and data reception in rooms and meeting areas.

In addition, nearly 500 cone-shaped antennas from Mobile Access Networks Inc. have been installed in the hotels. The antennas carry signals back to the Wi-Fi access points and cellular hardware that is installed in wiring closets on every floor, Schubert said.

He noted that after the resort opened in 2003, there was a staff meeting where "nobody's BlackBerry worked and no cell phones worked, and our CIO said simply to fix it."

The yearlong upgrade cost $2.2 million and was mostly completed last December. One unusual aspect was that lead contractor Acela Technologies Inc. got the cooperation of four major cellular carriers to improve signals inside guest rooms and large meeting spaces.

But Schubert said that because cellular providers are typically reluctant to pay for improving indoor signals, dual-mode phones might be beneficial because a hotel could depend entirely on a Wi-Fi network.

Marriott expects that eventually it will no longer provide traditional analog phones in its guest rooms, Schubert added. "Nobody is using them except to order room service or call somebody else in the hotel, or to order a wake-up call," he said.

To demonstrate his point, Schubert asked via an electronic poll how many of the people in the audience had used their in-room phones over the previous two days. Only 1% said they had.

– MATT HAMBLEN

Salesforce.com Adds SOA Tool to Boost Links to Apps

But its late arrival has forced many users to seek help from other vendors

BY MARC L. SONGINI

Salesforce.com Inc. last week introduced a new service that uses service-oriented architecture technology to ease the process of integrating third-party applications with its hosted customer relationship management software.

The new Salesforce SOA tool, which adds the integration technology to the company's proprietary Apex programming language, is the latest in a series of Salesforce.com products aimed at helping users link its software with applications from other vendors.

For example, over the past couple of years, the company has brought out packaged links to applications from Oracle Corp., SAP AG, Microsoft Corp. and IBM.

In addition, Salesforce.com partners are selling 32 packaged links to other applications on the Salesforce.com AppExchange online software marketplace, noted Ariel Kelman, senior director of platform product marketing at the San Francisco-based vendor.

IT managers said the SOA technology may help in the long term but is coming out far too late to help their companies immediately.

For example, Joe Graves, IT director at Stratus Technologies Inc., noted that the Maynard, Mass.-based maker of fault-tolerant servers needed such technology three years ago, when it was forced to take on a complex monthlong effort to link its Oracle ERP software with Salesforce.com.

Graves said his company had to do the project internally because "Salesforce.com is integral to our forecasting and order-processing workflows." Today, he said, "architecturally, it is as integrated as any of our back-office apps."

Chip Vanek, director of corporate and CRM applications at a software vendor he asked not be identified, said that his firm had to begin integrating Salesforce.com and other applications four years ago, when packaged tools were unavailable.

"We did integration from the beginning with Salesforce.com," he said. "If we didn't, it's useless — just a Web page."

The difficulty of internal efforts, and the expense of early packaged products, prompted the company to purchase an integration appliance from Mountain View, Calif.-based Cast Iron Systems Inc. to link seven applications with Salesforce.com, Vanek said.

The company may evaluate the new SOA tool, but only after it is fully tested by Salesforce.com, Vanek said.

Some users said that Salesforce.com's inadequate integration capabilities have prompted them to replace it with other hosted systems in recent years.

For example, MediaBound LLC, a Stamford, Conn.-based provider of marketing services, switched from Salesforce.com to a competing hosted service offered by NetSuite Inc. in 2004 because the NetSuite applications incorporated SOA technology, said CEO Justin Calvillo.

"Salesforce.com's approach to integration is to give people the tools to do it," Calvillo said. "NetSuite's approach is for people to just do it."

MediaBound decided to stop using the Salesforce.com service after four months because it encountered major problems when it tried to link Salesforce.com's CRM service and an accounting application, Calvillo said. The effort required that programmers reenter accounting data into the system multiple times, he said.

The hosted offering from NetSuite included integrated CRM and accounting applications, Calvillo noted.

He predicted that the new Salesforce.com SOA tool will not be an integration panacea for users looking to link products from multiple vendors. "There are nuances in [each vendor's] systems that will cause people to enter and reenter certain types of data," no matter what the technology, Calvillo said.

> "Salesforce.com's approach to integration is to give people the tools to do it. NetSuite's approach is for people to just do it."
>
> JUSTIN CALVILLO, CEO, MEDIABOUND LLC

Continued from page 1

Keeping Cool

very early in the project. And later construction decisions didn't fully account for future cooling needs, Hardy said, adding that it wasn't until after he was hired that he discovered that the new computer room had only a fraction of the required cooling capacity.

To try to avoid unpleasant surprises like the one that occurred in Jeffersonville, IT managers are increasingly investing in computer-aided studies that map the airflow in data centers — similar to the computational fluid dynamics studies that automotive or aircraft manufacturers use to see how air moves around objects.

Even if an IT facility has ample cooling capacity, it could still have heat problems if equipment isn't properly arranged. High-density systems such as blade servers are particularly vulnerable to airflow problems.

But airflow studies can cost as much as $150,000, said Mark Evanko, president and principal engineer at Edison, N.J.-based Bruns-Pak Corp., which conducts computational fluid dynamics studies as part of its data center engineering and design services.

Warm weather in Jeffersonville, Ind., this month overtaxed the air conditioning system in the city's data center, ruining $20,000 worth of IT equipment.

The studies can be complicated, Evanko said. Assembling the data for a computerized model can involve going from rack to rack and verifying every aspect of airflow in a data center, he said. The modeling also has to be able to account for possible changes in a data center's configuration.

Question of Effectiveness

In addition, there is debate about how effective the computational fluid dynamics studies are within data centers. Studies of airflow "look good," said John Musilli, a data center operations manager at Intel Corp. "But at the end of the day, it only works when you have a pristine design."

Musilli, who also is a member of the Data Center Institute think tank within the AFCOM professional association for data center managers, said that as soon as users begin adding equipment to data centers or moving systems around, it creates turbulence that can upset the airflow models.

Intel does use computational modeling in its data centers, but Musilli said that it is just one tool. The models "will tell you if you have a big problem," he said. But they can show large, ominous-looking red areas over racks of servers that upon closer inspection "may not be significant," according to Musilli.

Heat-related server problems may be obvious in some cases but less so in others. For instance, sporadic disk-drive failures may be attributable to normal mechanical problems and not necessarily to hot spots in data centers.

But Bob Sullivan, an engineer and consultant at The Uptime Institute Inc. in Santa Fe, N.M., said he believes that excessive heat is at the root of many IT equipment problems. "The problem is larger than people think," he suggested.

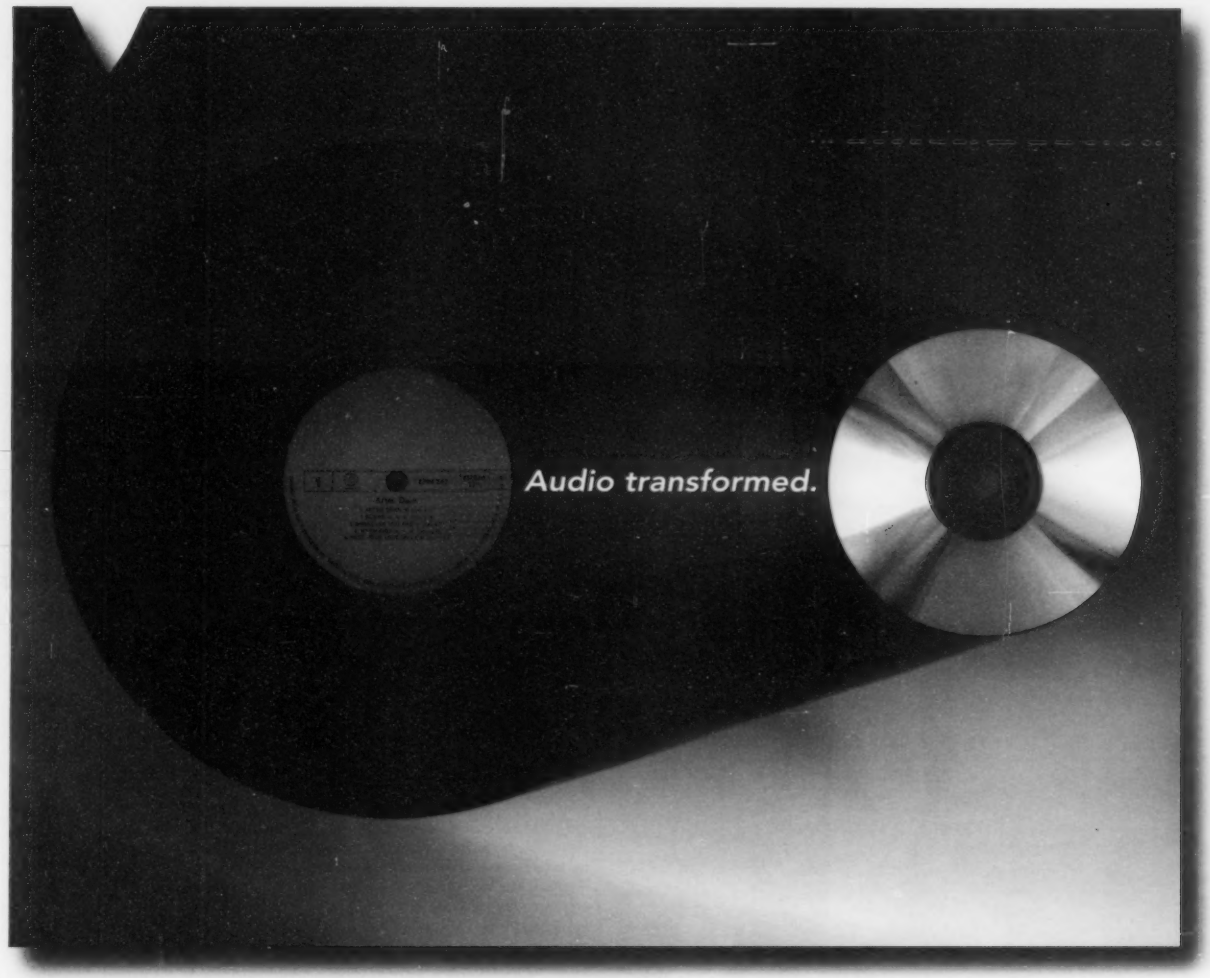
The Uptime Institute looked at 30 computer rooms totaling 300,000 square feet of data center space and found that on average, 10% of the server cabinets had hot spots — areas around them where the temperature was 77 degrees Fahrenheit or higher.

Sullivan said IT managers can do a lot to control the hot-spot problem by placing thermometer strips on their IT equipment, checking them regularly and taking action if temperatures are rising.

Mark Levin, an independent consultant at Metrics Based Assessments LLC in Milford, Conn., said that although data on heat-related system failures is lacking, he has seen evidence that IT managers are scrambling to cope with the problem.

The need to do something is often apparent when Levin tours data centers. "When you walk through a data center and can feel the hot spots, you know there is a problem," he said.

Hardy hopes to increase the cooling capacity in Jeffersonville's data center within the next two months. But until that happens, he said, "it's going to be a rough road and a few late nights."



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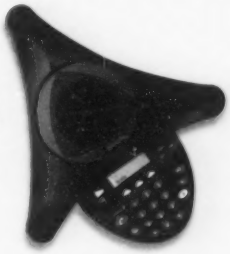

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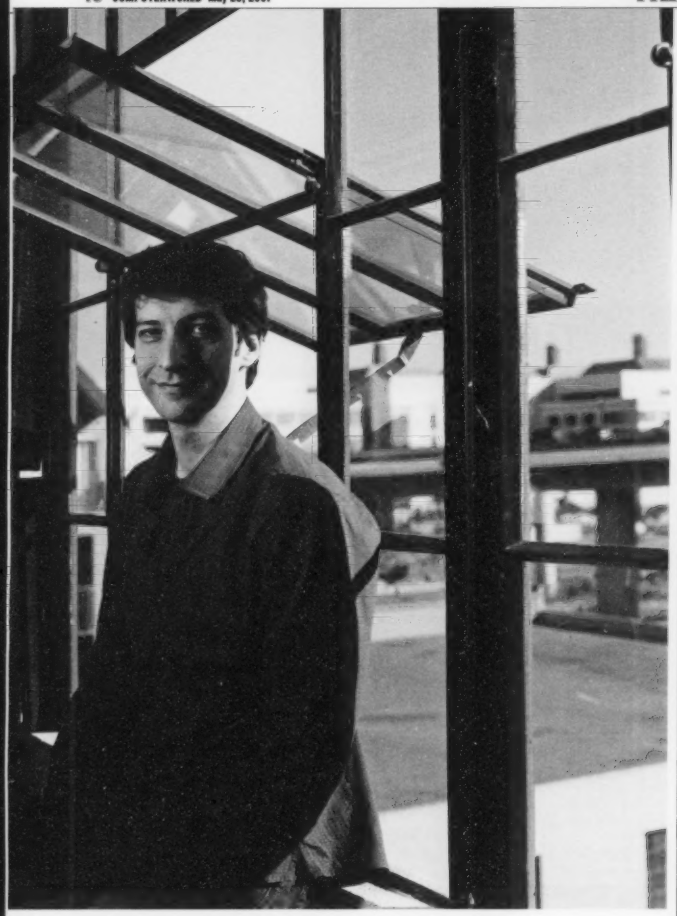

Jay Adelson

The **CEO** of Digg.com talks about **cutting out the middleman,** taking **risks** and quelling an **online riot.**

THE GRILL

Digg Inc. is a Web 2.0 company that lets users post news stories, which are then "dugg" (bumped up the list of popular stories) or buried based on the reactions of other readers. The company's Digg.com Web site has been on a steady growth path since February 2005, when a story about Paris Hilton's cell phone being hacked was "dugg," resulting in traffic doubling virtually overnight. Now, the "Digg this story" logo is included with countless online news stories, and having a story or blog post "dugg" has become an online status symbol. Digg.com celebrated its 1 millionth registered user in mid-April.

How did you come to be the CEO of Digg? It seems to be a bit of a jump from an entrepreneur who founded Equinix, a provider of data center and Internet exchange services. I've always been focused on disintermediation and applying technology or concepts that really level the playing field. That is what captured my interest when my friend Kevin Rose started to explain to me the early concept behind Digg. It is similar to how Equinix [eliminated intermediaries] for telecom companies. When the Internet became a commercial medium in 1994, all of the Internet had been funded and operated by the government and universities. When it switched over to one operated by telecommunication companies, a very strong hierarchy developed. Tier 1 ISPs, the top five players in the world, would collect a dime on every packet that flowed throughout the Internet.

Part of the reason was all the Internet networks had to interconnect with each other using these antiquated network access points operated by carriers. Equinix replaced these single, network-owned facilities with Internet business exchanges where anyone could exchange packets with anyone in a neutral playing field. This allowed the dot-coms like Yahoo and Google and others to really exert their might. Digg does a very similar thing to the media. I have had an incredible passion about communication and how to break down the barriers for establishing a voice of the people.

You have been quoted as saying, "A lot of companies are afraid to touch their original technology, to reconsider the premise on which they started the business. But when you stop doing that, that's when you get lapped." What are examples of companies that have refused to re-examine their original technology or premise and suffered for that? If you look across the Internet landscape, you see plenty of carcasses on the side of the road. The most famous ones are Friendster and even Digg look-alikes. In the world of the Web, you have to be willing to take risks, and the largest of the media companies out there tend to be the most risk-averse. They are publicly traded [and have] a very conservative approach that is not the speed at which the consumers need an Internet company to move. Digg has been willing to go out there, execute on an idea and pull it back if it fails.

What are some risks Digg has taken and then pulled back on? The top-users list we put out when we launched Digg — a list of users who had the most [story] promotions to the front page. At first that made sense because it created a competition and users liked it. Later, we decided to remove that because it had become a target for spammers to solicit these individuals for money to submit stories. It created a certain lack of confidence in the promotions system.

Dossier

Name: Jay Adelson

Title: CEO

Company: Digg Inc.

Locations: San Francisco and New York's Hudson River Valley

Favorite non-Digg technology: Video chat

Favorite nonwork pastimes: Home theater gadgets, construction carpentry, filmmaking

Favorite movie: *Raiders of the Lost Ark*

Favorite non-Digg Web site: TheOnion.com

Allowing users to submit articles that they are interested in democratizes the Web but also allows for a mob mentality that could result in users filling a site with crude content. In addition, topics that may be difficult but important – like genocide in Darfur – could be pushed to the back burner. How can these questions be addressed? The interactive Web is a democratic republic, but you have large groups of people who are much more passionate about a subject being the ones who drive that particular subject on Digg.

In terms of the mob, in Digg's methodology, it is never an inertia that can't be stopped. Even when a story has been promoted to the front page, passionate users will bury that as well. There is always the check and balance of groups of people. There is no such thing as a single mob in the Digg world.

We have never seen [a correlation between] the difficulty of a subject and what is popular on Digg. A story that may be more difficult for an American to hear is something you are more likely to see on Digg than the traditional media.

Editor's note:* Computerworld *talked with Adelson in a subsequent interview in early May after users revolted against Digg's efforts to prevent users from posting an encryption key used to copy DVDs. That revolt, which some have described as the first online riot and a pivotal episode in the

Continued on page 20

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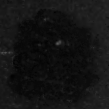

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GLOBAL DISPATCHES

An International IT News Digest

PC Dealers Strike Over Microsoft Charges

SURAT, INDIA

COMPUTER DEALERS in India's western state of Gujarat shut down for a day last week to protest allegations by Microsoft Corp. that 13 of them shipped pirated copies of Windows with their computers.

Bharat Randeri, president of the South Gujarat Information Technologists Association, contended that computer dealers in the state have policies that prohibit the use of pirated software. "We are not installing pirated software on the computers we sell," he said last week.

However, Randeri admitted that dealer employees sometimes install pirated software at the request of customers because of the high cost of legal products. "Microsoft should bring down the price of its software and offer better support," he said.

"We have been approached by dealers in other states who are also being harassed by Microsoft," Randeri added. "If Microsoft does not cooperate, we will tell our dealers to migrate to Linux."

In a statement, Microsoft said that it is "committed to working with the dealers to help them understand the benefits of original software."

■ JOHN RIBEIRO, IDG NEWS SERVICE

GLOBAL FACT

£100B

Total revenue generated from online retail sales in the U.K. since the first Internet stores opened there a dozen years ago.

SOURCE: INTERACTIVE MEDIA IN RETAIL GROUP, LONDON

French Bank Fined For Security Failure

LONDON

THE U.K. Financial Services Authority slapped a £350,000 ($692,000 U.S.) fine on Paris-based BNP Paribas Bank after weaknesses in its antifraud IT systems and management controls allowed an executive to illegally transfer £1.4 million ($2.8 million U.S.) from clients' accounts.

The senior employee made 13 fraudulent transactions between February 2002 and March 2005, forging client signatures and instructions and submitting false change-of-address documents, the authority said.

The FSA said that a flaw in the bank's IT system allowed the executive to evade normal security processes, such as receiving basic authorization and signatory checks.

"This is unacceptable, particularly with the overall increase in awareness around fraud and client money risks," said Margaret Cole, the FSA's director of enforcement.

No customers suffered financial loss as a result of the breach, the FSA said.

■ TASH SHIFRIN, COMPUTERWORLD U.K.

EC Urges Joint Cybercrime Fight

BRUSSELS

EUROPEAN UNION countries should work more closely to fight cybercrime, European Commissioner for Justice and Home Affairs Franco Frattini said last week.

At a press conference here, Frattini cited the work of two known online criminal gangs operating throughout the EU whose Internet fraud crimes are believed to have led to losses of more than $200 million (U.S.).

In a statement, the European Commission said that "legislation and operational law enforcement have obvious difficulties in keeping pace" with Internet crime. The likelihood of cross-border threats "further underlines the need for strengthened international cooperation and coordination," it said.

■ PAUL MELLER, IDG NEWS SERVICE

Compiled by Mike Bucken.

Briefly Noted

Business Objects SA has agreed to buy Inxight Software Inc., a Sunnyvale, Calif., maker of technology that analyzes unstructured data in different text formats, such as e-mail and Word documents. Terms of the deal were not disclosed. Paris-based Business Objects said it plans to use the Inxight technology to add unstructured data analysis capabilities to its business analytics tools.

■ JOHN BLAU, IDG NEWS SERVICE

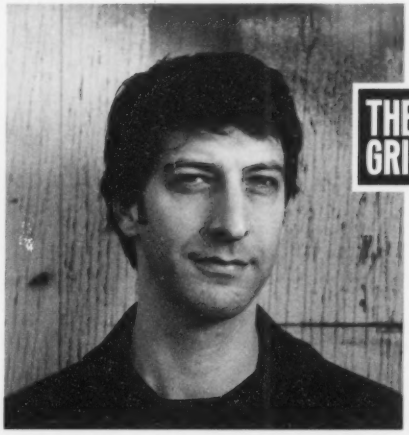
The Australian Customs Service is set to roll out a $4.1 million Australian ($3.37 million U.S.) document and records management system that will replace a 20-year-old application. Built by London-based services firm LogicaCMG PLC, the system will launch later this year. It uses Livelink software from Open Text Corp. in Waterloo, Ontario.

■ DARREN PAULI, COMPUTERWORLD AUSTRALIA

Intel Corp. and Geneva-based STMicroelectronics NV agreed last week to spin off some of their chip units to create a semiconductor company. Both will own the new venture, which will be based in Switzerland and employ about 8,000 people. It will build various types of flash chips.

■ BEN AMES, IDG NEWS SERVICE

THE GRILL



"The tools we have for the users to moderate themselves are enough to prevent [online riots] from happening most of the time. Digg's success is a testament to that.

JAY ADELSON, CEO, DIGG INC.

Continued from page 16

development of user-generated Web 2.0 sites, prompted Adelson and his team to change their minds and allow users to post the content. This next question is from that second interview.

Did the user revolt change your views on the potential dangers of the mob mentality taking over? The tools we have for the users to moderate themselves are enough to prevent this from happening most of the time. Digg's success is a testament to that. The method they were using — we're definitely going to look at that in the future. How do we allow the users who don't agree with [the posting of certain content] to have a voice too? We have to be sensitive to all our users. I don't think this changes my attitude that this was something we can manage within the way the site operates.

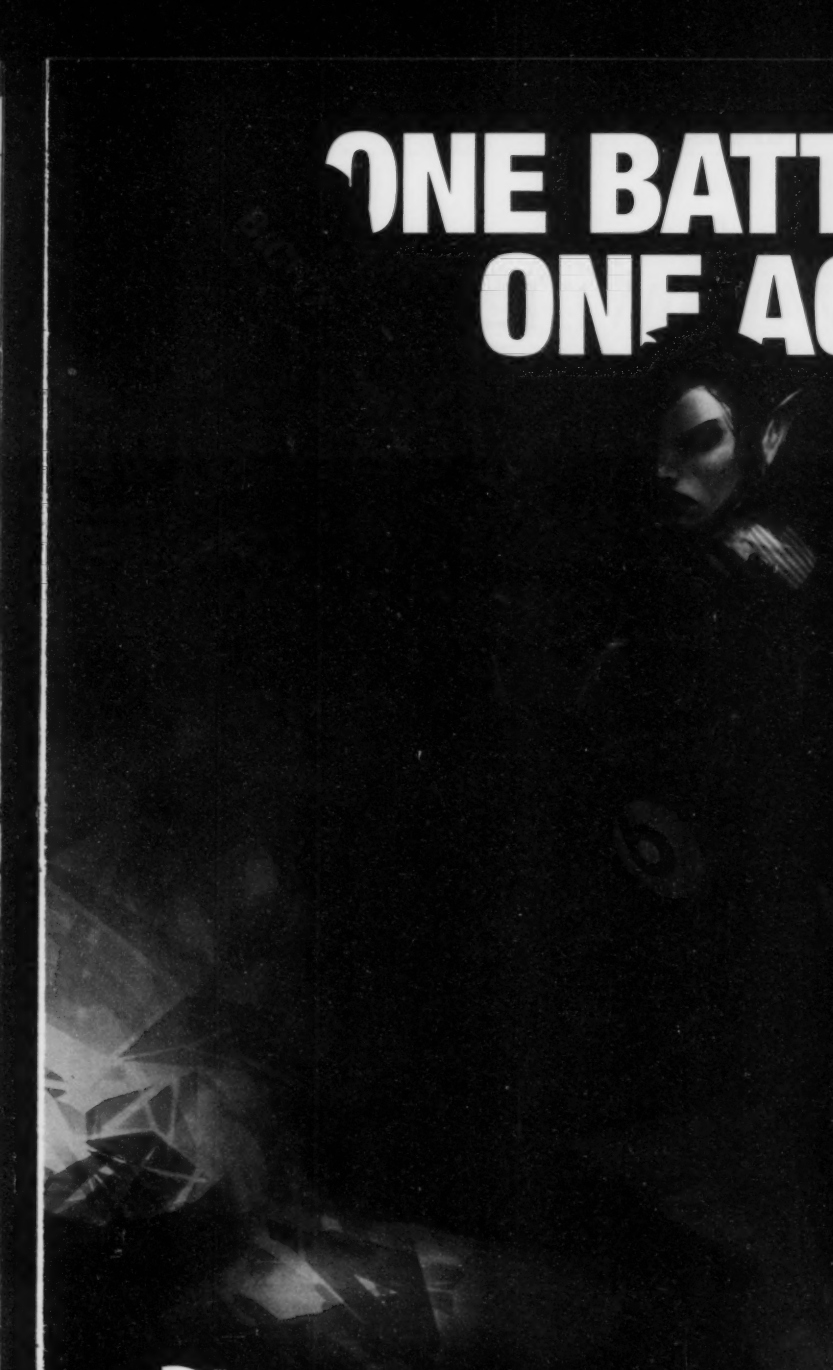
One of the distinctions that have been made between the dot-com era and Web 2.0 is that instead of racing for an initial public offering, many companies are being built to be sold. Is that what you're doing at Digg? We're definitely not doing that at Digg. Digg was built to achieve this goal of democratizing the media. We are interested in doing this ourselves. There may be partnerships we can have. Maybe there is someone who could acquire us and get to our goal faster and more efficiently. Now, we're not interested in that.

What are the toughest technical and business challenges on your plate right now? On the technical challenge, a lot of it is the math. It is interpretation of data in useful and innovative ways to make everyone's user experience better from a technology standpoint. That is where Digg focuses a lot of its attention. There isn't any cool wisdom I can draw from. It is all new.

The business challenge is about people. Digg is in a massive growth phase. I need to make sure I find the right people and grow my company in a way that we can continue to have our speed, flexibility and innovation. That is a very challenging task. The things you would typically think of as the obstacles — like monetization and scale — have been solved a hundred times before us, and they are not huge challenges for us.

– INTERVIEW BY HEATHER HAVENSTEIN

ONE BATTLEFIELD
ONE AGENT



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TRBA

DON TENNANT

Difficulty Swallowing

TWO WEEKS AGO in this space, I posed a question: How much credence do you place in white papers that are written by independent research firms like *Computerworld*'s sister company, IDC, when those white papers are sponsored by the very companies whose products or services are being evaluated?

DON TENNANT is editor in chief of *Computerworld*. Contact him at don_tennant@computerworld.com.

The responses I received tended to address vendor white papers in general rather than those produced by a market research firm in particular. The consensus was that these white papers offer some value as one source of information among many that should be consulted in the process of researching a particular topic.

That said, some readers expressed the view that vendor white papers made available on Web sites like ours aren't worth the hassle they have to go through to get them. "What is particularly irksome," one reader wrote, "is that to read the white paper, one must complete directory information on oneself and then get the inevitable onslaught of calls from the vendor. Ugh."

On the specific issue of the value of vendor-sponsored white papers prepared by research firms like IDC, some readers were charitable. "It may not be the intent of the [white paper's] authors," one wrote, "but when you have the signer of your paycheck listed on your work, even unconsciously your work will reflect that." Other readers were harsher. "Vendor-sponsored white papers from IDC or any other research firm are no better than vendor-written papers," wrote an IT director in Florida. "The appearance of impropriety is enough for me to dismiss it as no better than something a vendor's PR department developed itself."

So, what does IDC have to say about all this? Are these vendor-sponsored white papers unbiased research or not?

First of all, let me make it clear that the only reason I'm singling out IDC here is that IDC and *Computerworld* have the same parent company, International Data Group, and I'm disinclined to go into anyone else's house with a white glove without first going into our own. That being the case, on May 8 I sent an e-mail to two senior vice presidents at IDC in which I asked some questions related to the sponsors' influence over the content of these papers.

It quickly became apparent that this is a touchy subject at IDC, because neither of the SVPs responded to me. Instead, they forwarded my questions to Michael Shirer, IDC's corporate communications director.

In a May 17 response from Shirer, he informed me that sponsors are allowed to review the white papers before publication, that IDC makes the final editorial decision regarding all white paper content, and that IDC couldn't tell me whether payment for these reports is contingent on the sponsor's satisfaction with the findings, because the company doesn't disclose contractual details concerning its clients.

I subsequently posed this two-part follow-up question to Shirer: Does IDC prepare vendor-sponsored white papers with the same neutrality and objectivity that it prepares non-vendor-sponsored research papers? If not, is it fair to say that the conclusion IDC draws in these white papers — that the sponsor's products or services deliver value and are worthy of consideration — is a *fait accompli*?

To his and IDC's credit, Shirer provided this direct response to my question the following day: "All of IDC's published research, including vendor-sponsored research, is accurate, objective, and unbiased."

I expressed my appreciation to Shirer for the response, but I was candid with him. I told him it was difficult for me to swallow.

So I have another question for you: Do you have the same difficulty?

Don Tennant

DO YOU REALIZE WHAT SOME COMPANIES WOULD PAY for THIS KIND of NAME RECOGNITION in the CHINESE MARKET?
SYMANTEC
MISTAKEN TROJAN

THORNTON A. MAY

Content Cluster Canaries

THE VORTEX of the next economy is the content cluster. That's what various futurists, economists, jurists, hedge fund barons, investment bankers and venture capitalists are saying about the information, media and entertainment vertical markets.

The content cluster is an important place. Just about everyone in the IT industry recognizes that we are moving toward a post-Internet, high-bandwidth, totally globalized, massively digitized, planetary commercial system. IT executives in the content cluster are already there. You can think of them as the first amphibians to come ashore on the digital beach or, moving further along the evolutionary scale, the first hominids to experiment with walking erect on the digital savannah. To pursue another metaphorical line, IT executives in the content cluster are canaries in the commercial mine shaft, testing the breathability of the truly changed atmosphere that soon will fill all of our lungs.

THORNTON A. MAY is a longtime industry observer, management consultant and commentator. Contact him at thorntonamay@aol.com.

Some executives talk about transformation. Content-cluster executives live it. Every day, something significant in the business changes. Only in the content cluster will you see such bare-knuckled capitalism, such ego, such technology disruption, such variety in business models, such rapid change, such confusion, such courage, such fear and such high-quality leadership — all on a daily basis.

The big changes that have hit the information, media and entertainment industries of the past few years will be frequently cited by next-generation business historians as they enumerate the opportunities and dangers of working in an environment heavily impacted by technology innovation. But the history of the content cluster

is tomorrow's business. Today, IT executives in these industries are on the leading edge of redefining what a corporation looks like in terms of its assets, people, processes and competencies.

Digitization is key inside the content cluster. For businesses in industries outside the cluster, the three stages of digitization — applying increasing amounts of computer technology to analog, manual processes; linking some subset of those digitized processes together; and figuring out how that digitization changes work itself — are experienced gradually. As the businesses progress along the road to digitization, some jobs go away and new jobs are created. Inside the content cluster, though, this gradual progression is accelerated nearly to the speed of light; digitization affects every piece of the business all at once.

As one content-cluster CIO explains, "With digitization, you never really know what is going to happen until you get there." This CIO is no Rip Van Winkle just waking up to the transformation that soon will sweep the business landscape. "I have experienced this digital revolution in two other industries," he says. "Digitization is happening more intensely and at a very rapid pace across every one of our businesses."

Technology executives working in the content cluster have to be ahead of the curve, naturally. They know that it's still much too early to have all the answers. Instead, they are asking the right questions, and the right questions are the tough questions. One senior executive I know has a placard prominently displayed in her office that reads, "Control is an illusion." That's a statement that will reverberate with any IT executive working in the content cluster. But those executives nonetheless are able to lead, even though they are on a road for which there are no maps — and not a lot of rest stops.

VIRGINIA ROBBINS

Comfort Is For Home, Not Work

OUR PLATES were well picked over, but the waitress was hesitant to interrupt us to clear the table. My dinner conversation with Susan, a potential employee, was easily into its third hour. Susan's a smart, experienced technician — exactly what we needed for our start-up. I'd answered every question that she'd thrown at me, but she just wasn't ready to change jobs. Her current one was very comfortable, she said.

VIRGINIA ROBBINS is a former CIO who is currently the chief administrative officer responsible for technology and bank operations at a start-up bank in Lafayette, Calif. You can contact her at **vrobbins@sbcglobal.net**.

Ah, comfort. I crave it at home. A loving spouse, a cozy chair, fuzzy slippers — these are things that create a much-needed decompression zone between work and sleep. We each have comforts that reduce the day's stresses or console us on bad days. Relaxed at home in the evening, we are more likely to think of solutions to the challenges that we faced during the day. The comforts of home help us perform better and, in doing so, help our careers.

But comfort at work? It's career killer. Sure, it's good to have a few routines that bring predictability to the day, such as an afternoon walk to the coffee shop with a colleague or a sports discussion with the guys in sales on Monday mornings. These routines do more than give us necessary breaks; they help connect us with our co-workers and build trust — things that can improve our work performance.

But when our actual work turns from daily recurrences to years-encrusted routine, we can find ourselves wrapped in a warm blanket of familiarity, all snug in what has most likely become a stagnated career.

Sometimes we choose comfort at work because our lives outside of it are in turmoil. Or we may need some time to direct our energies toward other things — school or a volunteer project, for example — that take priority over our careers at the moment. At those times, having a comfortable job can be a good strategy. But if you're interested in advancement, keep this time as short as possible.

Susan was responsible for her younger brothers, and over the past year, she had focused her energy on getting the youngest into Berkeley. As we talked about her recent job history, she admitted that she had become more and more attached to her job. It was just so nice at work: She knew everyone, and she knew what to expect and how to solve problems. Sure, there were occasional crises, but overall, each day was predictable. What Susan saw as comfort I saw as daily routines that were rhythmically soothing Susan's career to sleep.

How does a manager move someone out of a comfortable job without losing him? First, you need his permission. You need to find out why he's chosen comfort. If he has done it because of a personal situation that he'd rather not discuss, then that's that. If you make changes without his permission, he'll leave.

After getting permission, talk about how and when duties should change. For Susan, a twentysomething, I discussed how her career might advance because of the experiences she would gain at her new job. As she began to understand the scope of the opportunity I was presenting and its potential benefits for her career, she also began to comprehend what staying comfortable would cost. It took her few more days to incorporate all that we had discussed, but on Monday she signed our offer letter.

WANT OUR OPINION?

More columnists and links to archives of previous columns are on our Web site: **www.computerworld.com/columns**

READERS' LETTERS

Macs Safe for Now; That's Good Enough

I HAVE BEEN using Macs for 15 years with no virus protection. I've never had a problem ["Mac Backers Bash MacBook Hack, Defend OS X's Mettle," *Computerworld.com*, April 24]. Is Mac's OS "safer" than Microsoft's? Absolutely. Is this related to market share? Of course. Do I (and other Mac users) care? No. Will Mac's OS always be safer? Who knows? But for now, it is.

Carl Munson
Attorney, New Jersey

Unlovable E-books

THE PROBLEMS with e-books are the cost of the hardware and the overpriced data ["Why E-books Are Bound to Fail," *Computerworld.com*, April 27]. An e-book device will need to be under $40 to be a success, and the battery life needs to be in the 48-to-60-hour range. I suspect it will eventually get there, and the e-ink/OLED technology looks promising. But overpriced data is the big killer. The actual cost of producing a copy of an e-book is less than a penny. The rest is just marketing overhead.

Jesse Pollard
Systems analyst, ITT, Waldorf, Md.

I'M A published author, in both e-books and print. While I love the e-book community and support it with everything I write, I value and adore the printed word even more. I recognize that print books will always be a factor because, as a reader, I want to hold a book, smell it, touch the cover art and flip through the pages and find out if my suspect is the villain or if my hero saves the day.

Laura Baumbach
Publisher, MLR Press LLC, Albion, N.Y., laura.baumbach@gmail.com

Don't Blame Victim Of the Monopoly

IN HIS column "Security Isn't Just Avoiding Microsoft" [Opinions, May 7], Ben Rothke blames the victim – the user – rather than the vendor. Sure, if Apple had the monopoly, it would behave as Microsoft does. But if we had three or four operating systems competing, at least one of them would do so on the basis of being more secure.

Charles Perrow
Yale University emeritus professor of sociology, Stanford, Calif.

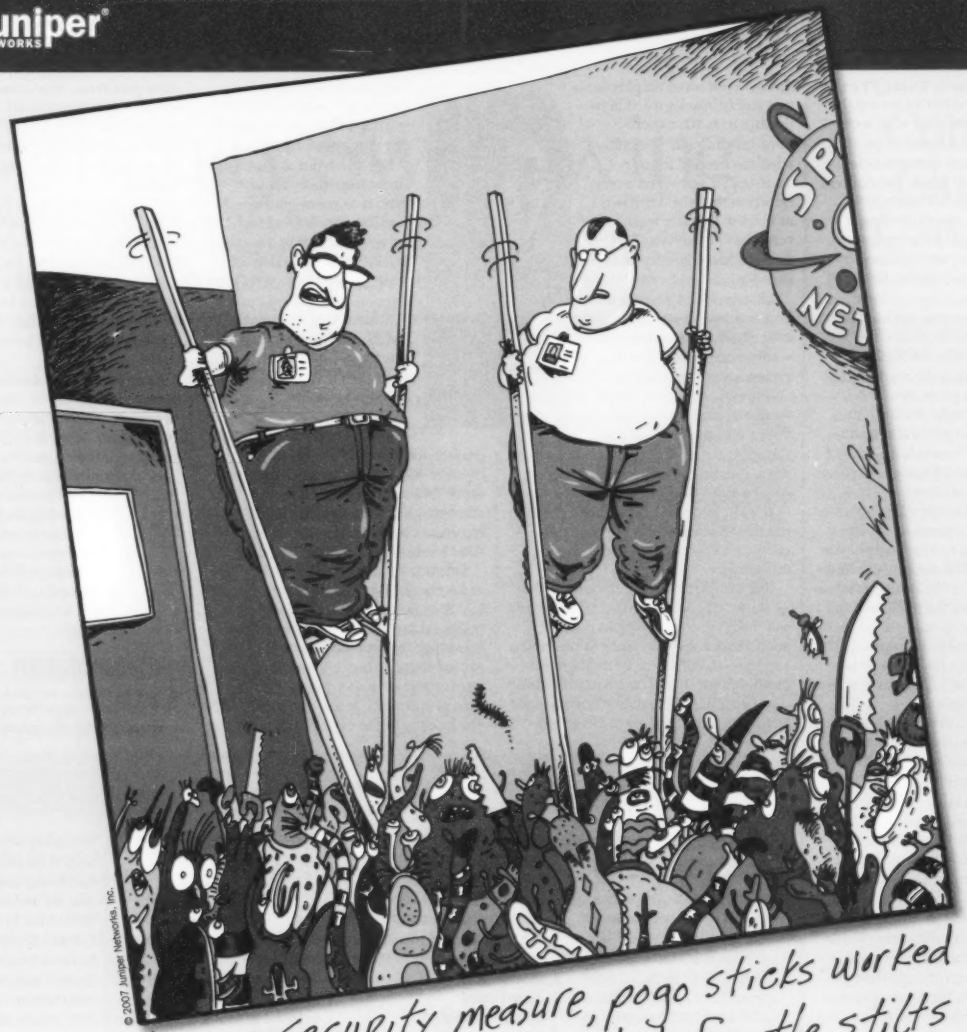
Vital, Not Venerable

I AM WRITING to ask you to stop using terms like "venerable" when describing the IBM System *i* (also known as AS/400). I have been programming on the AS/400 since it came out in 1988, so I know it has been around for a while. On the other hand, I have been avidly reading *Computerworld* all this time as well. You work hard to keep your publication up to date, and as your April 25 article "IBM to Open Its Midrange Systems to MySQL's Database" shows, IBM is also working hard to keep the System *i* fresh and running the latest software. Terms like "venerable" unfairly mislabel a very current line of machines and prejudice your readers against an option they should seriously consider.

Alan Novick
Director of IS, Pressman Toy Corp., Piscataway, N.J.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

Juniper NETWORKS



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STRATEGIES & TACTICS

Inside 05.28.07

Web Site ROI. Analyzing the return on your Web site takes some effort, but it's doable and the resulting business intelligence is worth it. **PAGE 30**

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Opinion: Paul Glen **PAGE 36**

WENDY WAHMAN ILLUSTRATION

REMOTE WORKER'S Survival Guide

Managing your IT career while toiling far from base camp requires a special set of skills.

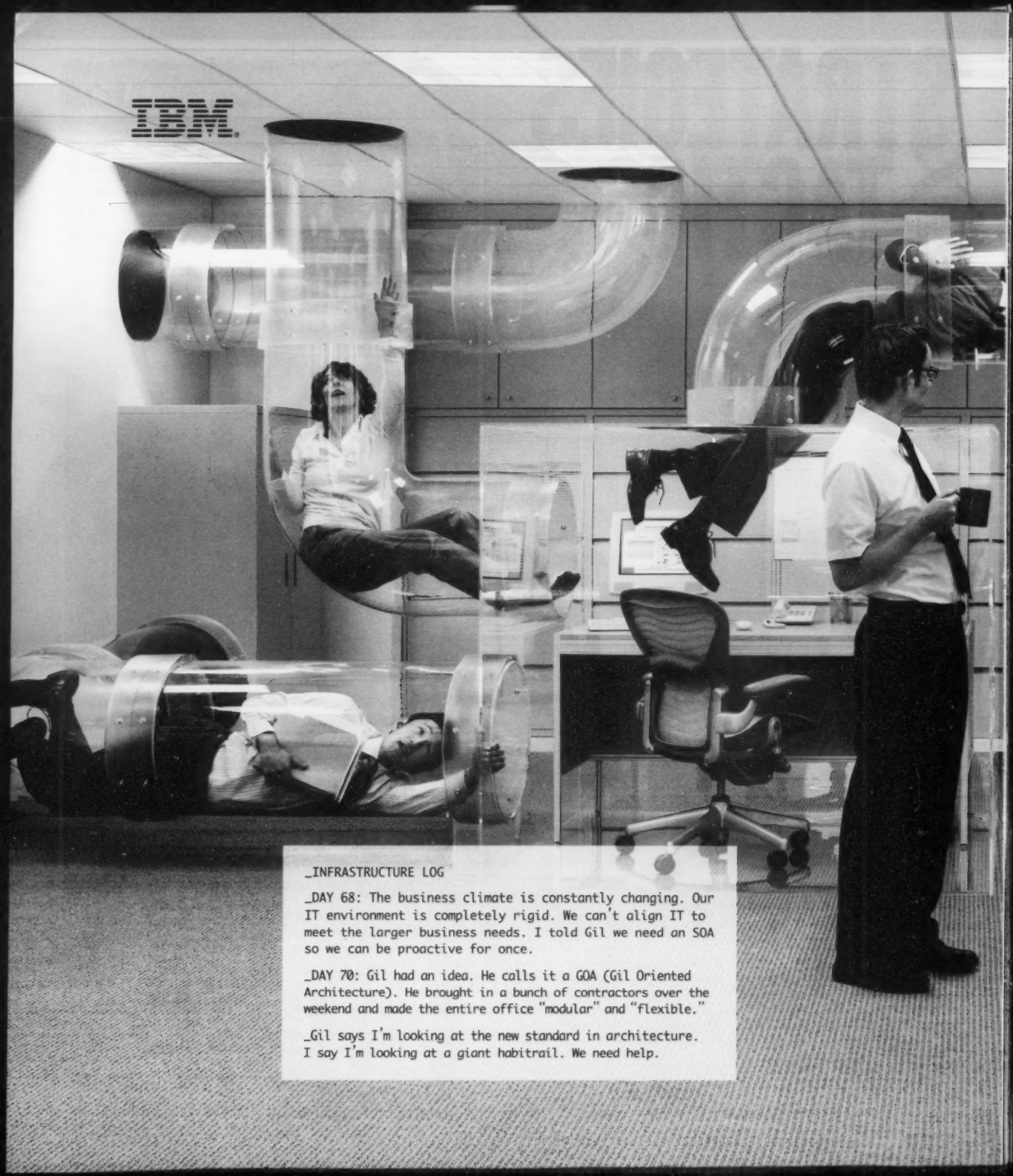
BY JULIA KING

GARY LAROY, a Michigan-based client delivery executive at Electronic Data Systems Corp., hasn't worked in the same state as his boss for many years. In fact, at any given time, he may have two or three different bosses under EDS's matrixed management structure. He hasn't ever received an official career road map from the company, nor has he ever expected one.

Brian Ellerman is the Tucson, Ariz., site manager of scientific information systems at Sanofi-Aventis, a $25 billion global pharmaceutical company with headquarters in Paris and Bridgewater, N.J. He reports to multiple managers, one in New Jersey and another in Tucson, and to a global service director in Paris. No single manager or team leader is responsible for managing his job performance or salary. Instead, they all have a say in his annual review and compensation.

Laroy and Ellerman are among the millions of U.S. professionals who toil far away from managers, mentors and others whose approval and influence can make or break a career. As many as nine out of 10 employees now work at locations other than company headquarters, according to Nemertes Research LLC in Mokena, Ill. Moreover, 83% of executives — up from 57% last year — surveyed by Nemertes consider their companies to be virtual workplaces —

Continued on page 28



_INFRASTRUCTURE LOG

_DAY 68: The business climate is constantly changing. Our IT environment is completely rigid. We can't align IT to meet the larger business needs. I told Gil we need an SOA so we can be proactive for once.

_DAY 70: Gil had an idea. He calls it a GOA (Gil Oriented Architecture). He brought in a bunch of contractors over the weekend and made the entire office "modular" and "flexible."

_Gil says I'm looking at the new standard in architecture. I say I'm looking at a giant habitrail. We need help.

> If you think your boss has some kind of plan for you, you're wrong. You are responsible for your own career.
>
> **BRIAN ELLERMAN,** TUCSON SITE MANAGER OF SCIENTIFIC INFORMATION SYSTEMS, SANOFI-AVENTIS

Continued from page 25

defined as having employees who work away from their supervisors or work groups full or part time.

But judging from a spot check of career experts, business executives, human resources managers and IT professionals, very few companies have updated career paths and management plans to reflect the increasingly decentralized nature of work, especially in IT. For the most part, IT professionals working in the wild are pretty much on their own when it comes to managing their careers.

Sanofi, for example, does have a career development plan that enables employees to follow different tracks reflecting their interests and skill sets, ranging from technical expertise to global management. But managing one's career is still up to the individual employee. "If you think your boss has some kind of plan for you, you're wrong," says Ellerman. "You are responsible for your own career."

As developers, business analysts, subject-matter experts, data mining specialists and others in IT migrate through projects for various business departments and managers, career management remains very much a do-it-yourself activity. Here's a compendium of survival tips from successful IT professionals who have continuously advanced their careers while working far from their corporate homelands.

Learn to Live Off the Land

As part of a small IT team in the field, you become more critical to that business unit than you might be at headquarters, says Peter Walton, vice president and CIO at Hess Corp. "Outperform your local site manager's expectations, and that word will get back to your functional manager," he says. In smaller locations, such as branch or regional offices, "most collaborations are cross-functional and face-to-face, which means you'll generate more innovative solutions than your counterparts back at headquarters," Walton adds.

Jimmie Jackson, an IT district manager for the U.S. Postal Service in San Diego, jumped at the chance to coordinate local work on a national billing and accounts-payable project that IT is running at USPS headquarters in Washington.

"When you work for an organization like the USPS with 800,000 employees, you have to be aware of what you can do to make yourself known," Jackson says. "Volunteering locally for a national project that has visibility all the way to headquarters is a good way to do that. Working on a project or system that people use every day helps remind them of your success on a daily basis."

Keep All Chiefs Around the Same Fire

Familiarity with the local office's culture and priorities, coupled with an understanding of corporate objectives, can help remote workers keep multiple managers on the same page, says EDS's Laroy.

"You'll never see it on a job description, but keeping everyone on the same page is a survival skill," he says. "I've got three different people whom I introduce as my boss, but only one of them has direct responsibility for my career. Still, I have to deal with them all effectively."

He keeps them all in the loop on all his activities. "If I e-mail one manager, I'll copy the others," Laroy says. "The mistake you have to avoid is dealing separately with managers and having different conversations on the same issue. It's almost suicide."

Study the Local Culture, Learn the Native Language

Translation and negotiation skills are critical for employees who have multiple managers, says Tim Waire, vice president of business performance improvement and IT at Constellation Energy Group Inc.'s generation group in Baltimore.

"Sometimes managers' goals are at odds with each other, and you have to negotiate," he notes. "You're forced to wear the hat of the business that wants to move forward with their business plan, but you have to do it in the context of the corporate strategic plan."

For example, when corporate IT recently set an ultra-aggressive schedule for upgrades to Constellation's enterprise suite of financial applications, Waire had to negotiate system downtime that was workable for his business unit but still met corporate IT's timeline. Had he not been totally familiar with the workflows, reporting processes and other business requirements of the local group, negotiating a schedule that was workable for all parties would have been impossible.

"It's a lot more of a business and negotiation function than a pure technology function," Waire says of his role as a line-of-business IT executive. It's also an ideal jumping-off point to a role on the business side or even the corporate CIO's office, he says.

Befriend Natives Near and Far

"Don't be content to sit where you are located and let things happen," advises Ellerman. He sets up regular trips to other sites and organizes meetings with people both above and below him in the company. "The challenge of any large global organization is that we are interconnected, and many times we are interconnected in ways that we don't even realize or understand," he says. "If I'm at another site, I take time to grab a beer after work and delve deeper into discussions about what's going on." This gives him more information to put together a bigger picture about what's happening in the company.

"You have to be resourceful and use your networking and marketing skills," Ellerman says. "If you sit back and wait for your career to happen, it will happen, but just not with you involved."

"You have to have connections and people to sponsor you, or you can kiss your career goodbye," says John Spencer, CIO at the American Society of Health-System Pharmacists and a former consultant at both Computer Sciences Corp. and IBM Global Services.

"You have to very actively manage your relationships" with colleagues both at headquarters and your own location, he says. "If you're out there as a lone ranger, you'll never go anywhere."

"It's almost like an exercise in marketing, but in this case, you're marketing yourself," says Laroy. "It's important to document what you do and what your accomplishments are and to make sure that on a regular basis, [that information] gets into the hands of those managing your career." Even though he is not required to do so, Laroy sends his various managers monthly status reports, which he says they use when pulling together his year-end performance review.

"If you wait to see what is required and just do what's required, you sell yourself short," he notes. "You have to let people know what's going well and what's not going well. It all boils down to communication. It's a way to make sure the people you don't see every day are working for you."

SIGNALING THE BOSS

Fifteen years ago, when management expert and best-selling author Jaclyn Kostner was writing her doctoral dissertation on geographically dispersed work teams, the No. 1 issue affecting remote workers was career implosion. The cause was a woeful lack of communication.

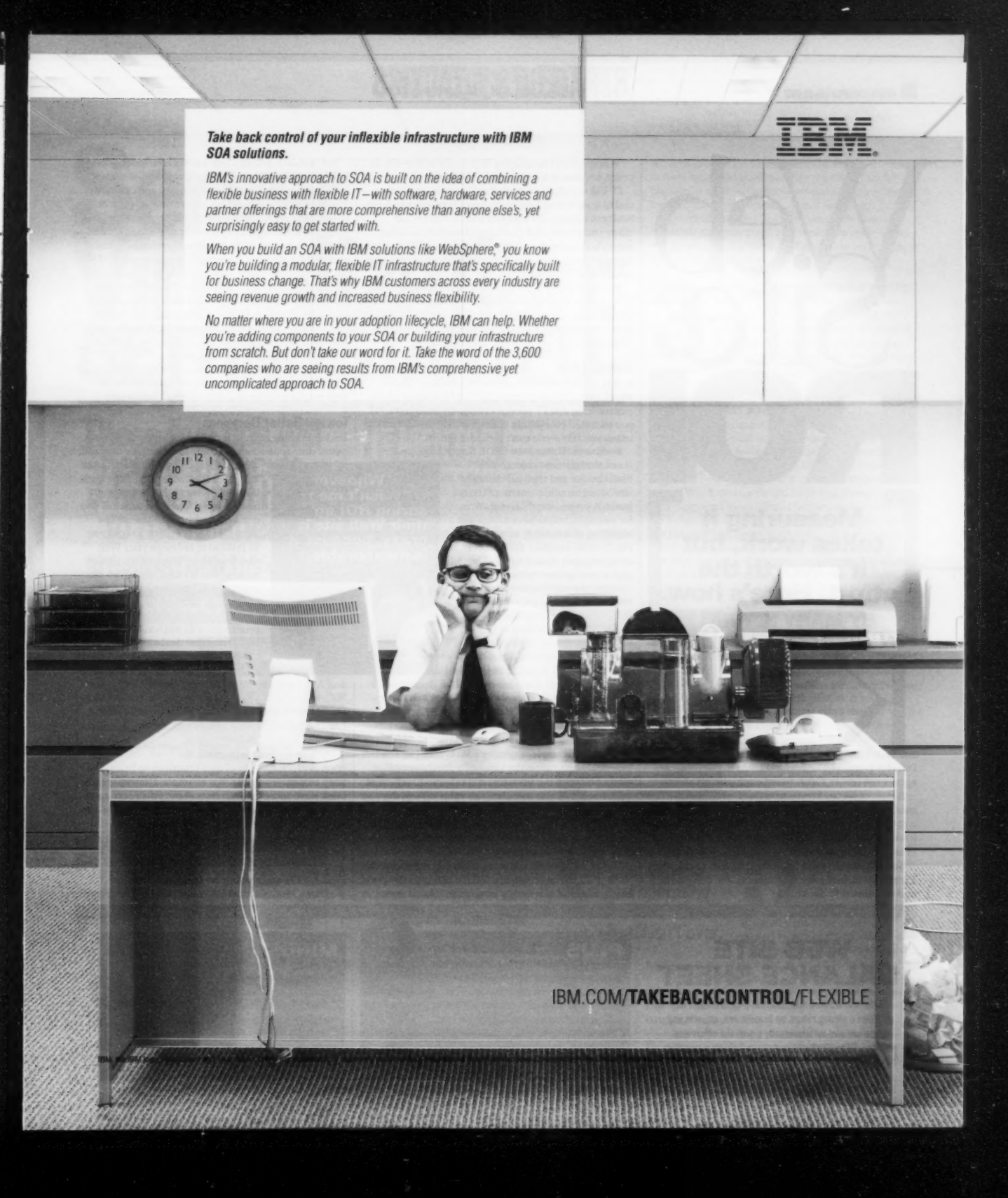
"When you're out of sight, you're out of mind, and your career won't do well," says Kostner, now president of Bridge the Distance, a Denver-based training consultancy specializing in remote management and virtual teams. "Today, despite all of the new technology we have and a global economy that is changing drastically, there's still a ceiling for people who work remotely," she observes.

To help workers break through that ceiling and communicate more effectively with their managers, Kostner came up with CARE, a model that precisely lays out what information remote employees should regularly communicate to their geographically dispersed managers. It includes these four elements:

- **Changes** in project status, working hours, partnership agreements and anything else that affects performance.
- **Accomplishments,** both team and individual.
- **Requests** for tools, personnel and anything else they need to be more effective.
- **Environmental details** that can affect productivity in the remote workplace.

"What you're trying to do with the CARE model is communicate the details that your remote boss can't see," says Kostner. "Write down the key points before you pick up the phone, and send a bulleted e-mail after the call." A big part of managing your career as a remote employee, she says, is "getting smarter about communicating about what you're working on and the results you're getting."

–JULIA KING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Web Site ROI

Measuring it takes work, but it's worth the effort. Here's how.

BY MARY K. PRATT

KIA MOTORS AMERICA INC. values its online customers; it just doesn't value them equally.

The company assigns different numeric rankings to Web site visitors who request contact from a dealer, download a brochure or ask for updates, says David Schoonover, online and CRM marketing manager at the Irvine, Calif.-based car manufacturer.

Kia gives higher scores to visitors who, based on market research, are the most likely to actually buy a car (those who request contact from a dealer) and lower values to those further away from a buying decision (the keep-me-updated group).

Schoonover says Kia uses those figures to calculate the return on its online investments and drive design and functionality decisions.

"Whoever isn't measuring ROI on their Web site is crazy, because it is measurable," he adds.

IT has to justify every dollar it spends, so it's crucial to understand how technology investments drive business results. Yet analysts and IT leaders say many companies still don't calculate ROI on either individual online functions or their overall Web sites, leaving uncertainty about the sites' effectiveness and what could be improved.

But there are best practices for measuring Web site ROI — even for sites like Kia that don't handle sales transactions. Those practices mirror the considerations and calculations used to rate the success and effectiveness of any other IT investment.

Defining ROI

ROI is really a measure of what a company cares about, says Michael Kogon, CEO of Definition 6 LLC, a consulting and IT services company in Atlanta. "If you measure everything but still don't know what's important, then you can't measure return," he says.

For a useful measure of ROI, Kogon says, understand the business objectives behind the site and then measure the site based on achievement of those goals. A professional services firm, for example, might have a Web site objective of attracting new customers. It could measure the number of white paper downloads, because experience shows that a certain percentage of potential customers who read a firm's white papers are likely to become actual customers.

Whoever isn't measuring ROI on their Web site is crazy, because it is measurable.

DAVID SCHOONOVER, ONLINE AND CRM MARKETING MANAGER, KIA MOTORS AMERICA INC.

But ROI needs to look at costs as well as benefits, says Megan Burns, an analyst at Forrester Research Inc. "What does it cost to build this functionality and to maintain it? What does it cost to be used? How many people use it? What's the alternative if we didn't have it on the Web site, and how much would that alternative cost us? That's the kind of thinking you have to have," she says.

Take, for example, a retailer's Web site. The retailer can easily determine the value of a purchase online compared with the investment it takes to handle that sale. But it can also calculate the value of, say, the store-locator function, because a certain percentage of Web site visitors who use that feature will actually go to a brick-and-mortar store and spend money that they might not have spent otherwise.

"What ROI models allow you to do is run through the 'what if' scenarios so you know if it's falling on the positive or negative side and by how much," Burns says.

For instance, FedEx Corp. knows how much it costs to handle a package-tracking request online versus how much it costs to take that request at a call center. The shipping company also knows how much it costs to complete a supply request online versus processing the request through a paper order or phone call, and how much it costs to do an online invoice adjustment compared with what it costs to have an agent do it.

David Zanca, senior vice president of e-commerce technology at Memphis-based FedEx, wouldn't disclose figures, but he did confirm that online processing is generally the least costly method of handling transactions. Imagine what it would cost if the 4 million daily tracking requests on FedEx.com suddenly shifted to the company's call center.

"We have a tremendous amount of information about traffic and flow, and we watch very carefully about how we place things to drive activity," Zanca says

Toward Better Decisions

Understanding such ROI dynamics is key to making better decisions about Web site functions, design and, ultimately, spending, says Forrester analyst Harley Manning. "The question isn't how much you're spending; it's, what kind of return are you getting for your investment?" he says. "If I say it's going to cost you $3 million to redesign your Web site, you'll say, 'Wow, that's a lot of money.' But if I said, 'Our Web site generates $12 million in net profit, but we can increase the conversion rate and generate $37 million in net profit with a $3 million investment,' you'd take that deal any day."

That's something Bank of America Corp. understands. E-commerce and ATM executive Sanjay Gupta says the Charlotte, N.C.-based bank analyzed its online customers and found that they were not only more loyal but also had 15% higher deposit values and 20% higher loan balances than offline customers.

With those figures in mind, the bank continually creates and improves online functions to bring and keep customers online. For example, Gupta says, the bank introduced online chats about two years ago, so customers can now access a specialist right away if they can't find what they want on the site.

"By doing the right thing for the customer," Gupta says, "we see financial benefits."

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WEB SITE BALANCE SHEET

Although no Web site function is guaranteed to produce a strong return on investment, experts say some are almost universally worth the effort and expense. Other features can prove to have a negative ROI if customers don't want or need them.

– MARY K. PRATT

PLUS

- **Search.** This is a fairly inexpensive function that helps customers find what they want, thereby keeping them on your site.
- **Blogs.** Lively blogs can generate new leads, and they require a relatively small investment in technology – plus the time it takes to maintain them.
- **Videocasting.** Digital equipment makes this a lower-cost option than it used to be. And, of course, we all know a picture is worth much more than words alone.

MINUS

- **Registration.** Visitors get turned off if they're required to register. They're more willing to do so if they get something out of it, but that extra something can cost you.
- **Music.** It costs extra, and some users find it annoying. Make sure there's a good business reason for it.
- **Multiple languages.** A multilingual site can look impressive, but if your clients don't need it, save the expense.

Server Virtualization: GETTING STARTED

These five tips will help you decide whether and how to move ahead.

BY JONATHAN HASSELL

A GROWING AWARENESS OF SERVER VIRTUALIZATION

	2005	2006
Already using	29%	40%
Piloting	12%	11%
Aware and interested	17%	24%
Aware but not interested	23%	17%
Unaware	19%	8%

BASE : 603 North American IT decision-makers, July 2005; 527 North American IT decision-makers, May 2006

SOURCE: FORRESTER RESEARCH INC., CAMBRIDGE, MASS.

VIRTUAL CONTENDERS

For server virtualization on Intel-based servers, which single vendor interests you most?

VMware	58%
Microsoft	9%
Hewlett-Packard*	9%
Dell*	8%
IBM*	8%
Other	8%

BASE: 268 North American IT decision-makers, May 2006
* Respondents' write-in choices

SOURCE: FORRESTER RESEARCH

IT MENTOR **VIRTUALIZATION – the move from real, physical hardware to virtual hardware – is being seen as one of the "next big things" in IT.** There are more virtualization options for IT departments than ever before, including XenSource Inc.'s and Virtual Iron Software Inc.'s open-source applications, Microsoft Corp.'s Virtual Server and VMware Inc.'s venerable products.

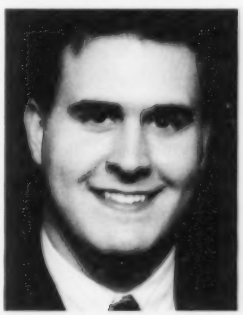
But if you're new to this party, you might not know how to get started. Here's the workflow and procedure I recommend for assessing whether virtualization is right for you and, if it is, for getting things moving.

1 DETERMINE WHETHER YOUR SERVERS ARE RIPE FOR CONSOLIDATION. Consolidating hardware is the No. 1 reason for considering virtualization. Aging hardware, bursting data centers and burgeoning power needs all have played a part in the move to virtualization. Why should you continue to acquire distinct physical machines when you can move real servers to even bigger machines at ratios of 3-to-1 or even 10-to-1?

The first step in virtualization is determining if you have the right type of infrastructure to support it. Look for a lot of machines doing similar tasks, and make sure you have more than 10 of them. For 10 or fewer, the payoff is questionable.

2 GET THE ADMINISTRATIVE HEADACHES OUT OF THE WAY. Any complex move like server consolidation is likely to affect some internal processes. As in any major project, it's important to get stakeholder support and management buy-in. You'll most likely need to present a business case for moving to virtual services, including total financial outlay and money saved. You may also have to address staffing: As the number of physical servers is reduced, some budgets dictate that staff size must be reduced proportionally. You may be required to anticipate workloads and quantify the effect that fewer physical servers — but more virtual servers — would have on your department's overall workload.

Also, examine your licensing needs. Depending on which software you'll be running on your virtual machines and what their configurations are, you may need to adjust licensing.



"When the final boot into the virtualized operating system is finished, your job still isn't over.

3 SELECT YOUR HARDWARE AND SOFTWARE. There are several choices at a variety of prices. It all comes down to whether you need simple server consolidation or advanced hosting and network configuration capabilities. Several vendors have starter kits that let you pilot and explore the technology for a relatively low cost.

4 START MOVING TO VIRTUALIZATION. When the time comes to actually move from physical to virtual, there are some migration tools that can help. Microsoft will soon release tools that let you move a fully installed server running a supported version of Windows to a virtual hard-disk format that is fully supported by its Virtual Server product. VMware has a similar tool in the works. These migration utilities can save you hours, if not days, when you're performing the actual move. Other things to consider:

- **Take advantage of clustering capabilities.** Using high-performance clusters gives your virtual machines higher availability and improved performance.
- **Think about management.** How will your staff manage the virtual machines? What scripting languages and APIs does your virtual server software support? Are you able to access certain controls via the command line for simple remote-access-based administration?
- **Don't forget about storage.** You'll need a very fast disk subsystem to get maximum performance from your virtualized servers. Typically, you'll find that iSCSI-based disk offerings are a good value. They are fast and reasonably priced and have great configurability.

5 MONITOR, ASSESS, TWEAK, IMPROVE. When the final boot into the virtualized operating system is finished, your job still isn't over. Keep tabs on the project as you begin moving users and services to the new platform. Establish performance and usage guidelines and thresholds, monitor them, and tie those metrics to future enhancements. Consider tweaking hardware configurations and network setups or increasing bandwidth as needed.

Hassell is a consultant and author of Learning Windows Server 2003, 2nd Edition *(O'Reilly Media, 2006). Contact him at jon@jonathanhassell.com.*

BLOG TROLLS AND CYBERSTALKERS: HOW TO BEAT THEM

Cybercreeps can poison corporate blogs as well as personal ones. Here are five ways to control the pests.

By Mary Brandel

Anyone who has participated in the blogosphere lately knows the troubling story of Kathy Sierra, a prominent blogger who received online threats of violent sexual acts and murder. When the harassment spread beyond her own blog to two others that were affiliated with other prominent bloggers, Sierra became so terrified that she canceled a speaking engagement and took a hiatus from blogging.

But Sierra isn't the only one to have endured online harassment. In fact, some would argue that she's just the visible tip of an iceberg that has been around since Internet discussions began in the early 1980s. "Between now and the early days of Usenet, the level of abusive behavior has been distressingly constant," says Tim Bray, a veteran blogger and director of Web technologies at Sun Microsystems Inc.

But there are 70 million blogs online today and an average of 1.4 new blogs created every second, according to blog search engine Technorati Inc., so there are just more people participating, whether on corporate or personal sites.

Anyone who enters the blogosphere for business or pleasure needs to be aware of the types of people who get satisfaction out of disrupting online communities. According to Derek Wood, vice president of clinical operations at PsychTracker Inc., a journaling site for people with mental illness, the harassment comes in two general forms: trolls and cyberstalkers. It's important for blog participants and sponsors to understand the psychological makeup of both types so that if they encounter online abuse, they'll have some idea of what they're facing and how to respond to it.

A troll is a person who posts with the intent to insult and provoke others, Wood explains. The goal is to disrupt the normal traffic of a discussion group beyond repair. "A group is considered to be cohesively destroyed when two-thirds to three quarters of the messages are a result of [trolls'] comments," Wood explains. They often target new bloggers, who are more likely to take offense, hence the term "troll" (as in "trolling for newbies").

Trolls are characterized as having an excess of free time and are probably lonely and seeking attention, Wood says. "They often see their own self-worth in relation to how much reaction they can provoke," he says.

Cyberstalkers can assume many different forms, according to Wood, although they're characterized by a continuing pattern of communication that the recipient considers to be offensive. Cyberstalkers tend to be malicious, premeditating, repetitious, obsessive, vengeful and threatening in a way that may make victims fear for their physical safety. Cyberstalkers usually disregard warnings to stop.

Fighting Back

In many cases, victims feel they have very little ammunition — legal, technological or tactical — to stop the abuse. However, there are some things bloggers and other online contributors can do to try to avoid this kind of harassment, or at least to keep it from crossing into the physical world.

1 KNOW THE TROLLS' TACTICS. According to Wood, the first rule for dealing with trolls is to avoid being deceived by them in the first place. Don't trust anything you receive or read without verifying the poster through known, reliable sources, he suggests. Also, ignore postings or private e-mails that are suspicious, such as those that praise, flatter or evoke a sympathetic response.

2 DFTT. This acronym, which stands for "Don't feed the trolls," is one of the more important in the blog world. "Just like in-person bullies, trolls feed off your reaction," says a former victim who asked not to be identified. "Under no circumstances should you acknowledge the behavior or repay it with anger or defensiveness. If you don't react, they'll get bored and go away."

If ignoring the harasser doesn't get him to stop, at least you won't be fanning his flames, Wood says. "The more a person responds, the more they teach the stalker about themselves or divulge information they shouldn't," he says.

3 MAINTAIN YOUR PRIVACY. Don't publish any personal information, such as your address or phone number. If you need to allow participants to contact you in the physical world, use a post office box number. If you are being harassed, Wood suggests asking your state's motor vehicle and voter registries to put a block on your address and phone number. "Otherwise, any person may obtain them just by inquiring," he says.

Some longtime bloggers, such as Bray and his wife, Lauren Wood, a senior technical program manager at Sun, also refrain from posting photos of their children on their personal blogs.

4 BLOCK AND BAN. If you're experiencing abuse on a moderated blog, you can appeal to the administrator, who can try banning the troll. Be prepared to include a history of the troll's posts, including full headers.

Some blog services offer technologies that enable you to block offensive participants. Using the WordPress open-source blogging tool, a blogger can moderate the comments of anyone who hasn't contributed to the site before, which helps eliminate hit-and-run trolls. Other plug-ins enable bloggers to ban certain IP addresses.

5 KEEP A LOG. Be sure to keep a copy of anything you receive from the harasser, Lauren Wood suggests. If he begins to contact you by phone rather than e-mail, take notes on what he says and how often he calls. "You'll need proof rather than, 'I think he was calling three times a day,' " she says. "You'll want a log that says, 'He called at 9:14 p.m.' "

Above all, when you have an online presence, you need to prepare yourself for the possibility of becoming a target, Lauren Wood says. "Just like in the real world," she says, "you need to realize which dark alleys you shouldn't enter at night, and if you do, have protection and know what you should do." ▸

Brandel is a Computerworld *contributing writer in Newton, Mass. Contact her at marybrandel@verizon.net.*

Know Your Troll

Unfortunately, there's a wide variety of trolls and cyberstalkers on the Web. Here are some of the types and their characteristics, according to Derek Wood, vice president of clinical operations at PsychTracker.

TROLLS

Spammer: Posts to many newsgroups with the same verbatim post.
Kook: As a regular member of a forum, habitually drops comments that are unrelated to the topic or even to reality.
Flamer: Contributes only by making inflammatory comments.
Hit-and-runner: Drops in, makes one or two annoying posts, and moves on.
Psycho: Has a psychological need to feel good by making others feel bad.

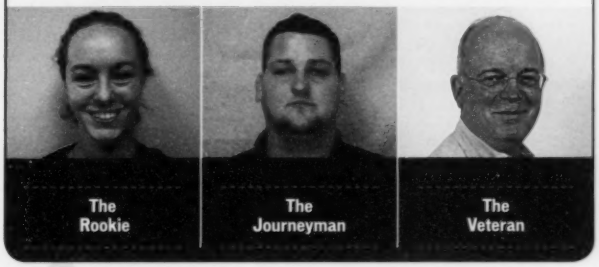
CYBERSTALKERS

Intimate: Has a history of controlling behavior and emotional abuse during a relationship. Usually male, this is the most common type of cyberstalker.
Delusional: Builds an entire relationship with the victim in his mind, regardless of whether any prior contact has taken place. This type of stalker is likely to have a major mental illness.
Vengeful: Is angry with the victim over some real or imagined insult or injury and may be trying to get even. This type of stalker may be a psychopath.

– MARY BRANDEL

When Your Paycheck Comes From India

Three IT pros talk about the flip side of outsourcing.



The Rookie | The Journeyman | The Veteran

By Mary Brandel

AFTER A DECADE OF WATCHING U.S. IT JOBS get siphoned off to India, we're seeing an interesting turnabout lately: Indian companies are increasingly recruiting throughout the world, including in the U.S. Some claim that the trend is a reaction to a shrinking talent pool in India. But companies such as Infosys Technologies Ltd., Tata Consultancy Services Ltd. (TCS) and Patni Computer Systems Ltd. say they're merely responding to the same strategic and competitive pressures that are pushing other global services firms to find and place employees throughout the world.

We talked with IT professionals at different stages in their work lives about the career and cultural implications of signing on with an Indian outsourcing firm.

The Rookie

Katrina Anderson, 22, of Phoenix, was one of 126 new hires at Infosys who went to India for training for six months before returning to the U.S. to work. She graduated in 2006, earning a bachelor of science degree in mathematics from the University of Notre Dame, where she had had positive experiences in two low-level programming courses. She made the Infosys connection at a career fair and is currently a software engineer.

THE CAREER MOVE: "The opportunity to train in India was eye-opening, as I came to realize how respected and prominent Infosys is within the country," Anderson says. "It's exciting for me to work for a company that is up and coming on the global playing field. I was thrilled at the chance to live and work in another country.

"The main goal of the training program for software engineers is to teach us how to read, understand and write code," she says. "A strong emphasis is placed on developing critical thinking skills. The training program started at a very fundamental level. We learned by completing hands-on projects, both individually and in small groups.

"Training was also provided from a business perspective," Anderson says. "We learned how to improve our listening skills and understand business requirements to prepare us for interaction with our clients. We were challenged to probe the clients for questions they may not have considered. In this way, we were prepared to work as consultants as well as software engineers."

THE CULTURAL EXPERIENCE: "Because the middle class is burgeoning after years of being virtually nonexistent in India, it appears everyone is fighting tooth and nail to be successful," Anderson says. "Therefore, it's not surprising that I found most of the Indians working for Infosys to be incredibly competitive and hardworking."

Anderson says the experience was very positive. "I enjoyed the friendly people, the food, the weather and the sightseeing."

The Journeyman

Jason Kratzer, 25, of Orlando, has spent eight years in various IT positions, from computer operator to senior systems administrator. He has earned certifications in support, network support, and Microsoft Windows and Exchange. He is working toward an associate degree in MIS from Seminole Community College, a satellite school of the University of Central Florida. He is currently a solutions architect at Patni.

THE CAREER MOVE: "Patni recruited me via e-mail and over the telephone after finding my résumé on Monster.com," Kratzer says. "I was hired as an implementation specialist. I'm being trained by my client, EMC Corp., as a solutions architect to design software solutions.

"I was very impressed with the organizational process flow and how [Patni] dealt with its employees," Kratzer says. "I was impressed by the processes they have in place for time management and project tracking, as well as the technical assets that are available. For instance, the system I use to track my project time and expenses makes it very easy to report on current projects. We also have servers available for testing different scenarios and software, so, for example, I can re-create a customer issue in my own environment."

THE CULTURAL EXPERIENCE: "Those raised in Indian culture typically have great technical skills and a very strong work ethic, and they work at a high rate of speed and are usually very proficient," Kratzer says. "Additionally, they're always trying to improve themselves educationally and professionally. I find that quite impressive and inspirational."

The Veteran

John Dubeil, 59, of Boston, worked for Boston Edison from 1968 to 1996 as an electric power engineer and later in IT application development, quality assurance and planning. He then spent 10 years as an analyst at Gartner Inc. Recruited by TCS late in 2005, he is currently a practice director.

THE CAREER MOVE: "Something I always wanted to do was grow a new organization from scratch, and IT services was a space that fit my skill set," Dubeil says. "What I provide to them is the experience of running a consulting practice, plus my architecture skills."

Dubeil says TCS's Indian origins had "absolutely no bearing" on his decision to join the company. "It had more to do with the fact that they understood where they were going and how they wanted to get there," he says. "It's a company with tremendous resources and lab capabilities, and that's tremendously attractive to me. I'm an engineer, and what an engineer likes to do is take known solutions and apply them to problems to arrive at new solutions."

THE CULTURAL EXPERIENCE: "I feel like I work at a services company with headquarters that happens to be in Mumbai, India," Dubeil says. "I've been there once in the past year and have a phone call every morning with my counterpart in India at 7:00, which is 5:30 p.m. their time. In terms of work ethic and culture, I can't say that much is different — good consultants are good consultants."

Turning the Tables

Infosys Technologies has doubled the percentage of non-Indian employees in its workforce since 2005, hiring people from more than 25 countries. Last year, it launched a two-year effort to hire 300 U.S. college graduates.

Patni Computer Systems has 13,000 employees in 21 global consulting offices and 19 global development centers. Most of its workforce is in India, with roughly 2,500 employees in the U.S. Patni plans to hire 15% to 20% of new workers from the U.S. in 2007.

Tata Consultancy Services North America last year reported that it plans to increase the percentage of non-Indians on its staff over the next three years from 8.3% to 15% in response to client requests for staffers with local language skills.

– MARY BRANDEL

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Compromise DRM Better Than None

Our manager wants more out of digital rights management than his company can afford right now. By Mathias Thurman

SECURITY MANAGER'S JOURNAL

I'VE BEEN getting my hands dirty working on our digital rights management implementation. DRM is something I've been working toward implementing since I came to this company, and we're finally within a couple of weeks of announcing its availability internally.

DRM will address some core security issues for us. We have a lot of documents, from product designs to service manuals, that we can't let slip out of our control. It would be disastrous for us if any of them fell into the wrong hands.

For example, we have contracts that are worth up to $100,000 for maintaining and servicing the equipment we build. The service engineers who do this contract work in our customers' fabrication plants typically take along our service manuals on CD-ROM discs. Anyone who got a hold of one of those CD-ROMs could sell our manuals or use them to offer service to our customers at a discounted rate. By protecting the manuals with DRM, the loss of a CD-ROM wouldn't be a dire event, since whoever found it wouldn't be able to access the documents.

This project has been a high priority for our CIO, and that's why I've been deeply involved in it. It's actually refreshing to work on projects at a technical level for a change, although it's not as if I'm writing shell scripts or compiling code.

I had wanted to deploy a robust DRM product such as Oracle's Stellent Information Rights Management (formerly SealedMedia) or Liquid Machines' Enterprise Rights Management software, but our budget wouldn't accommodate that. Instead, we're rolling out Microsoft's Rights Management Server. We're also saving money by installing RMS on one of our virtual machines.

VM is all the rage these days, since it allows you to run multiple server environments on a single piece of hardware. That saves both money and data-center rack space. And current VM technology makes it very easy to provision a new server.

On the negative side of the ledger for VM are security implications, but I feel that VM environments can be designed to be just as secure as stand-alone platforms.

For the most part, installation and configuration have been point and click. The RMS software installs within minutes, and basic setup takes about one hour, which includes the configuration of the Microsoft SQL database and a couple of Active Directory groups. We need those two new groups so we can configure two new policies for rights management.

> We've addressed the risk that accompanies allowing employees to create their own policies willy-nilly.

In addition to our central deployment of the RMS server, a SQL database and new directories, users will need to install the RMS client on their desktops, but that will be pretty simple as well. What's nice about this client is that no additional configuration is needed. Once the client is downloaded from Microsoft or obtained from our company's software download site, the client will listen for the service locator point configured on our domain controller and will automatically be configured to talk to the RMS server.

Gibberish for Outsiders

The new Active Directory groups are named "Director" and "Internal." The Director directory will map to an RMS policy that covers employees who have a pay grade or position of director or above.

The day-to-day implementation of this policy is pretty straightforward. If this policy is applied to a document, we will be assured that the document's contents will be off limits not only to outsiders, but also to lower-level employees who aren't part of the Director directory. This policy is likely to be applied to high-level strategy documents and other sensitive materials.

The Internal directory, in turn, maps to a policy that includes all valid employees who have an Active Directory entry and a corporate e-mail address. The Internal policy lets us encrypt documents so that they are gibberish to outsiders but readable by virtually anyone who authentically works for the company.

We may at some point increase the number of policies if that's necessary. But besides these two defined policies, we will allow users to apply restrictions of their own to documents. For example, if I created a vulnerability assessment report for our financial servers, I could apply permissions allowing only my team, the Unix manager and his boss to access the document. I could also restrict the ability of any of those permitted readers to cut and paste from the document or to print it.

We've addressed the risk that accompanies allowing employees to create their own policies willy-nilly. The Microsoft RMS infrastructure supports the concept of escrow, which means we can give certain people the power to view and remove permissions for any RMS-created document in the company. Thus, an important document can't be locked away forever just because someone who has permission to view it is no longer an employee. And we have written extensive training materials so that our help desk will be able to solve a lot of the problems that are likely to arise.

And so, our big DRM push is coming to fruition. It won't give us everything I want. RMS can be applied only to certain documents, all created with Microsoft software like the Office suite and the Exchange e-mail client. But we have a lot of sensitive material that exists as Adobe PDFs and Visio files, for example.

My hope is that this effort will be a successful beginning at protecting our intellectual property. My ultimate goal is to build on that success and obtain additional money so we can deploy a more robust DRM technology that's able to address most document formats within the company. For now, though, I'm looking forward to the extra protection we're about to have. ▸

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com, or join the discussions in our security blogs: **computerworld.com/blogs/security**.

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**.

SECURITY LOG

U.S. House Moves Against Spyware

The U.S. House of Representatives passed an antispyware bill that would make it illegal to access a computer without authorization when committing another federal crime, such as a computer scam. Such offenses could lead to up to five years in prison, while obtaining or transmitting personal information with the aim of defrauding or injuring someone would carry a penalty of up to two years in prison. The Senate has yet to act.

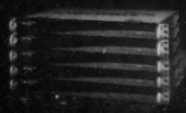
Cisco, RSA Work On Encryption

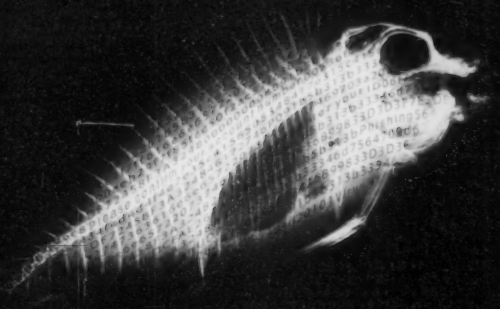
Cisco Systems Inc. and RSA Security Inc. are working together to deliver encryption products for data at rest on tape, disk and other media. The technology, called Storage Media Encryption, runs on a Cisco MDS 9500 or 9200 storage blade in the MDS 9000 director-level switch and uses RSA's Key Manager technology to control access and deployment of encrypted systems. The two companies expect to roll out a version for magnetic tape by the end of the year, with subsequent releases extending the technology to other media.

Disney ID Tool Goes Commercial

Start-up Bitkoo LLC is releasing as a commercial product identity management technology developed and deployed by The Walt Disney Co. Keystone provides cutting-edge authentication/authorization and auditing/compliance capabilities, says Bitkoo. The company's founder and CEO, Doron Grinstein, developed Keystone before leaving Disney. Disney has been using the technology for nearly three years to protect access to critical applications.

CAN YOUR E-MAIL SPAM SOLUTION KILL THE PHISH?





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PAUL GLEN

Managing Expectations

AT SOME POINT in every IT professional's career, he realizes that the secret to having happy customers is not fulfilling their every wish and desire but keeping their expectations reasonable. Low expectations are the secret to satisfaction, if not happiness.

For many of us, this epiphany is accompanied by a harking back to the original *Star Trek* series, in which Scotty, the ship's chief engineer, constantly underpromises and overdelivers. In every engineering crisis, he seemed to declare some deliverable impossible because of the constraints of time, resources or physics, only to deliver it immediately following the intervening commercials.

PAUL GLEN is the founder of the GeekLeaders.com Web community and the author of the award-winning book *Leading Geeks: How to Manage and Lead People Who Deliver Technology* (Jossey-Bass, 2003). Contact him at **info@paulglen.com**.

Although Scotty was great at managing expectations about the deliverables of his work, I don't remember him managing expectations more broadly.

And so it is with us in IT. Our insights into the importance of managing expectations rarely seem to develop beyond that first realization. We seldom think past that to consider other expectations we should be managing and how to do so.

To manage expectations effectively, you need to pay attention to these four issues:

- Product
- Process
- Roles
- Relationships

Product. Whenever I hear people talking about managing expectations, they are usually referring to keeping a project within scope. They talk about how to limit their customers' expectations of what a project's product will do.

But managing expectations about product goes beyond simply keeping clients informed about what features will be in and, perhaps more important, what will be out. You also need to keep them calibrated on which of their myriad desired features will be deferred and whether and when they can expect to see them appear. Avoiding the conflict of discussing deferred features altogether is a poor choice. The false expectations raised will come back to bite you.

Process. Clients have expectations about more than the content of our work. They also need to understand the process that we will be following to deliver it. Say you were at your doctor's office and he pulled out a needle and stuck it in your arm without warning. The content of the medical care would probably be sound, but I'll bet you wouldn't be happy about how it was delivered.

This is not the same thing as keeping clients informed on the internal details of the project process. Many clients don't want to know and are not equipped to really understand the fine points of process. They need to understand how progress is measured and reported. They need to understand the time frames and how and when to expect information to be presented to them. And it's important for them to get some sense of the risks that may threaten the project. The more they know what to expect about how the project will progress, the better they'll be able to handle the inevitable bumps in the road.

Roles. You must also manage clients' expectations on the roles that both you and they will play in a project. They need to know what your responsibilities and theirs will be. They have to have a sense of what, if any, boundaries exist around the roles. For example, they need to know if it's appropriate for them to attend internal team meetings or to contact other team members. They need to know the range and limits of their own authority and yours over the project. And they need to know how to appropriately influence the course of the project.

Relationships. Finally, you must manage their expectations about your relationship. Clients need to know what to expect from you, how frequently you will be in contact and the nature of the information that will be communicated. They need to understand the range and limits of your expertise. And they need to know what you expect from them as well. They need to be prepared for the tone of your interactions: Will they be formal, stiff and perhaps in writing, or will you be communicating through friendly, informal chats?

The reason that you must manage all these nonproduct dimensions of expectations is that clients are often not very good at discerning the quality of the products we deliver. They are not technical experts, so they gauge their satisfaction based on proxies — on other characteristics of their interactions with you. You can deliver a great product, exactly to specifications, and still have an unhappy client. You can deliver one that's late, pared down, even over budget and still have a happy client.

So if you want to have better client relationships, thinking more broadly about managing clients' expectations is a great place to start. Once you've figured out what expectations to manage, the trick is figuring out how to do it. But that's a topic for another day. ▸

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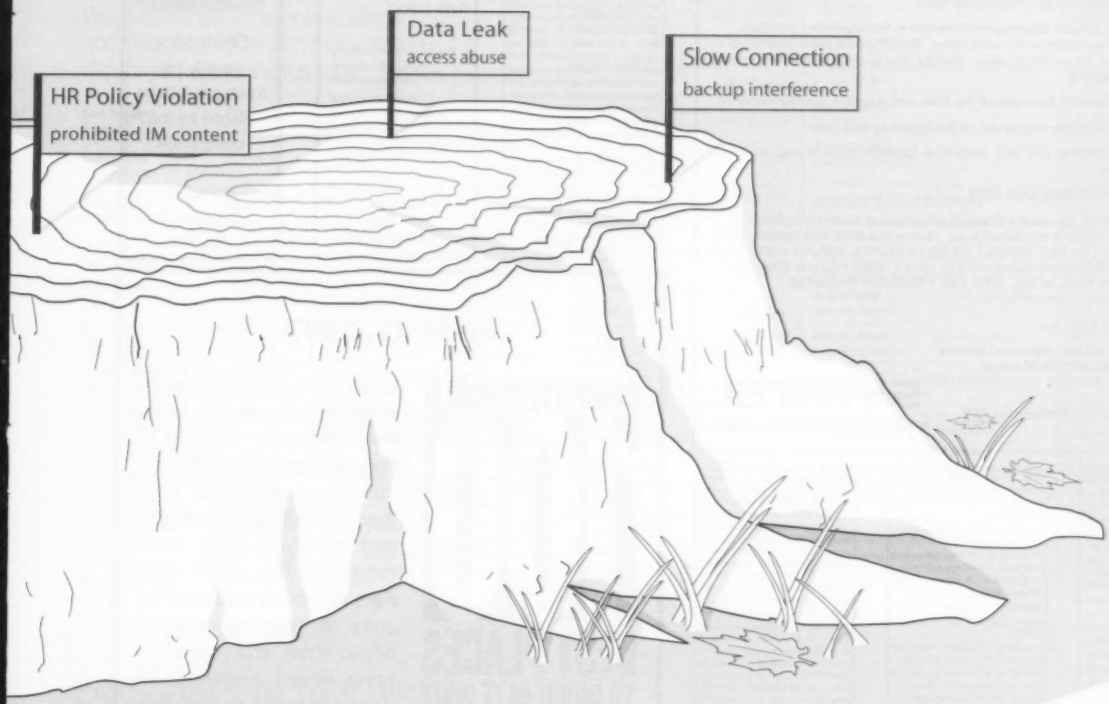

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June 18, 2007

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PCI

the advisory board will be responsible for collecting industrywide feedback on PCI, which is formally known as the Payment Card Industry Data Security Standard. She said the board is also expected to influence future enhancements to the standard.

One of the members of the advisory board is PayPal Inc., a unit of eBay Inc. Michael Barrett, PayPal's chief information security officer, called the board's formation a step in the right direction for PCI.

"The PCI standard is extremely important in protecting the payment card industry, but it isn't a finished work of beauty yet," Barrett said. "It's a work in progress. It has rough spots that need to be polished down." And that is best done by people who have had experience implementing it, he said.

Practical Advice

Barrett said PayPal already complies with the security rules and will be able to provide the PCI council's executive committee — made up of credit card company representatives — with real-world guidance about the standard. "We've seen where it works and where it doesn't, and can therefore make suggestions for tweaking the language here or driving it in a slightly different direction there," he said.

Other advisory board members include Bank of America Corp., JPMorgan Chase & Co., British Airways PLC and APACS Administration Ltd., a trade group for payment services companies in the U.K. The PCI council's executive committee will select seven more members at a later date. The goal is to ensure that the 21-member board has enough geographic and stakeholder diversity, Pitt said.

The PCI standard prescribes a set of 12 broad security controls that all entities accepting credit or debit card transactions are contractually obligated to implement. The requirements went into effect in June 2005 and cover functions such as data encryption, transaction logging and monitoring, and strong end-user authentication and access controls.

But many businesses began paying serious attention to the rules only after credit card companies warned last December that they would begin assessing stiff fines for noncompliance this fall. Since then, supporting the standard has become a major implementation issue.

One of the big complaints from companies is that the requirements stipulate specific controls instead of broad security objectives.

"PCI effectively is a proprietary standard," said Colin Whittaker, head of security at APACS. Now, he added, the PCI council "wants to get wider engagement in place" to ensure that the security rules meet the needs of businesses worldwide.

> **"The PCI standard is extremely important, but it isn't a finished work of beauty yet. It has rough spots that need to be polished down."**
>
> MICHAEL BARRETT, CISO, PAYPAL INC.

"We need to make sure the standard remains relevant to the emerging threat environment," Whittaker said. "And we need to make sure that it is sufficiently responsive and appropriate to all markets where payment cards are used, because there are different threat profiles [in different regions]."

"There's a lot of pent-up frustration in the market about not being able to help shape the standard," said Avivah Litan, an analyst at Gartner Inc. For instance, there is considerable confusion about when companies can use so-called compensating controls in lieu of the actual PCI requirements, she said.

Similarly, Litan said, companies are looking for better guidance on prioritizing the controls mandated by PCI.

The advisory board should be able to put pressure on the PCI council's executive committee to change the current situation, Litan said. But, she cautioned, the advisory board's charter doesn't touch upon PCI implementation and enforcement issues.

Currently, each of the five credit card brands has its own implementation, auditing and enforcement practices, and it's a huge challenge for businesses to keep up with all of them, Litan said. What's really needed, she said, is a way to rationalize the implementation of the PCI standard.

"The [advisory] board is a great communication vehicle," she said. "But there are some immediate problems that aren't being solved here." ▸

Minnesota Gives PCI Rules a Legal Standing

New state law will penalize merchants that store card data if breaches occur

BY JAIKUMAR VIJAYAN

Minnesota last week became the first state in the country to turn a core requirement of the Payment Card Industry (PCI) Data Security Standard into a law.

Under the state's Plastic Card Security Act, companies that suffer data breaches and are found to have been storing prohibited credit or debit card data on their systems will have to reimburse banks and credit unions for the costs of blocking and reissuing cards.

They could also be subject to lawsuits filed by individuals claiming to have been affected by violations of the law, which was signed by Gov. Tim Pawlenty after previously being approved by overwhelming margins in the Minnesota House and Senate. The law applies to all companies that process more than 20,000 card transactions annually.

The PCI standard, which was created by the major credit card companies, specifically prohibits retailers and other merchants from storing card data, such as the three- and four-digit verification codes on the back of cards and the full contents of a card's magnetic stripe.

Nevertheless, some retailers continue to keep card data on their systems, a practice that poses the greatest of any security risks to the information, said Mara Humphrey, director of governmental affairs at the Minnesota Credit Union Network in St. Paul.

"PCI rules make it explicitly clear that you are not supposed to be storing it," Humphrey said, adding that the new state law formally reinforces that requirement.

The credit union association was a major supporter of the legislation. Humphrey said the group's interest in the measure was driven by the increasing costs faced by its nearly 160 members as a result of data breaches at merchants.

"We've been hearing from credit unions who were very frustrated with the number of data breaches and the number of times they've had to reissue cards," she said. "They're frustrated that the onus has entirely been on them and not on the merchant."

No Time in Texas

The Minnesota law is similar to one that was proposed in Texas this year. The Texas House of Representatives passed that bill by a vote of 139-0 early this month, but the proposal failed to make it through the Texas Senate because there wasn't enough time before today's scheduled ending of the state's regular biennial legislative session.

"We needed about two more weeks to address concerns" about the bill, said Winter Prosapio, communications director at the Texas Credit Union League. "We did not have that opportunity. We got into the Senate without having the time to go through the bill and explain how PCI works."

The next legislative session in Texas isn't scheduled to start until January 2009. But in the meantime, the Texas Credit Union League will lobby for passage of national laws related to the PCI standard, Prosapio said.

"With every breach," she added, "there's an increased urgency at the federal level to make sure that merchants are adhering to their agreements [under PCI]."

But Gartner Inc. analyst Avivah Litan expressed concern about the fairness of Minnesota's law, pointing to the fact that many packaged payment applications store personal identification numbers and other prohibited card information by default. Often, companies are storing card data without even realizing it, Litan said. ▸

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FRANK HAYES ■ FRANKLY SPEAKING

Disconnected

WE HATE automated customer service systems. That's the key finding of a recent study by Accenture. Understand, the study didn't look at how well we like acquiring, installing, integrating, operating and maintaining customer service automation. It was about how well we like being on the receiving end. Short answer: We don't.

Wait, it's worse: We not only hate being subjected to automated customer service, we're also irritated enough that we're ready to change vendors in the hope that we'll have better luck elsewhere.

Worse still: Vendors are clueless about just how bad things are.

Accenture actually commissioned two separate surveys. In one, 1,200 customers of technology companies were asked what they thought of their suppliers' customer service. In the other, executives at 35 technology vendors were asked how well they believed their customer service systems performed.

The disconnect is stunning.

Three-fourths of vendors believe their customer service is above average, and 54% say theirs is up there with the best in the industry.

Meanwhile, 78% of customers say their vendors are only average or *below* average.

Among vendors, 57% say they have higher customer satisfaction because of new technology they're using for customer service, and 71% say customer problems are being resolved faster than before.

Among customers, 61% say service has *not* improved. And 57% actually describe themselves as somewhat, very or extremely upset by lousy customer service.

How can vendors be getting it so wrong? Sure, with only 35 vendors interviewed, the margin of error on that survey is well into double digits. But for the IT customer survey, the error is a lot smaller. We really are unhappy with our suppliers' customer service.

The answer turns out to be pretty simple. According to the survey, when we go through a vendor's customer service process, we want our problems resolved quickly and completely, preferably the first time through.

Instead, 64% of us have had to go back more than once to get problems solved. And 58% of us are not at all satisfied with the telephone-based self-help customer service that lots of suppliers have foisted on us.

See, it's not just you. We all hate this stuff.

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com**.

Meanwhile, vendors think this run-customers-in-automated-circles approach is a big success because it cuts their costs. They don't seem to notice that it also kills customer loyalty; Accenture calculates that customers with merely average satisfaction have a 73% likelihood of looking for another supplier.

That's how much we don't like automated customer service systems.

So — how do *our* customers like *our* customer service?

No, "customers" doesn't mean business-side users calling the IT help desk. Think about the actual customers who buy your company's products and services. What kind of automated customer service hoops do they have to jump through?

Touch-tone phone mazes? Endlessly circular voice-response systems? "Self-helpless" Web sites with support systems too finicky to make finding answers practical?

Sure, you know how much money your company saves by shunting customers into the automation. But do you track how many customers give up on that support Web site, and why? Do you keep metrics on how long it takes customers to use your automated phone support systems, and whether they appear to get the answers they need?

Put bluntly, are your company's customers any happier with your customer service automation than you are with that of your IT vendors?

And if you don't know, isn't it about time you started finding out?

After all, we know that IT people — who like technology, like using it and spend their days and nights putting it to work — are fed up with lousy automated customer service. And if we hate it so much, how do you think customers who *aren't* bitheads must feel?

Shocking, Simply Shocking!

In this call center, all the PCs are configured identically. But one user's machine locks up several times a day, and new hardware and software don't help. "Finally, I'm sitting in her cube puzzled when I notice her scrubbing her feet on the carpet and discharging the static into the frame of her cubicle," says a support pilot fish. "When I ask, she tells me she's 'always shocking stuff.' In desperation, I put a grounding mat under her keyboard, attach a ground strap to her chair and place a grounded floor mat on her cubicle floor – and the problem stops. I've grounded machines and displays, but this is the only time I've ever had to ground a user."

SHARK TANK

Results

Power user sends an urgent e-mail to the entire IT team: *I got knocked out of the Web site and can't get back in, and all the other computers got knocked out – froze.* "What a great way to describe an urgent issue," grumbles an IT pilot fish who got the message. "And she sent it to everyone in IT: developers, database admins, techs." But she did get results, right? Reports fish, "Turns out she stepped on a network cable and knocked everything out."

Now *That's* Desperation

Sysadmin requests more storage, and a storage tech mistakenly pulls a hard drive from a running Unix server. Though the error is soon discovered and the drive put back, the file system is corrupted. "After repeated tries, they unmount the file system," says a pilot fish on the scene. "Multiple errors are noted, and several files are deleted that couldn't be fixed. As a discussion begins concerning the steps needed to rebuild the file system and restore it from backup, the original admin who started all this wanders over and blurts out, 'Let's just turn the server over to the users and let them tell us what's missing!' "

Just as Well

The hotel advertises wireless Internet, but for this vacationing pilot fish, it seems to run like a slug. "Everything timed out anytime I tried to connect," fish says. "When I asked at the front desk if there was anything special I needed to do – password, settings, etc. – I got the following advice: 'What you need to do is turn off any antivirus software you have on your computer and disable all firewalls.' I smiled, nodded and decided I really didn't need to check e-mail that badly while on vacation."

ON VACATION OR NOT, e-mail your true tale of IT life to me at **sharky@computerworld.com**. You'll get a snazzy Shark shirt if I use it. And check out Sharky's blog, browse the Sharkives and sign up for Shark Tank home delivery at **computerworld.com/sharky**.

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